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THE

NEW ENGLAND FARMER;

A MONTHLY JOURNAL,

DEVOTED TO

AGRICULTURE, HORTICULTURE,

AND THEIR KINDRED

ARTS AND SCIENCES;

AND ILLUSTRATED WITH NUMEROUS BEAUTIFUL ENGRAVINGS.

THE PRIME PRINCIPLES OF AGRICULTURE.

1. The soil ought to be kept dry; or, in other words, free from all superfluous moisture.
 2. The soil ought to be kept clean; or, in other words, free from noxious weeds.
 3. The soil ought to be kept rich; or, in other words, every particle of enriching material which can be collected ought to be applied, so that the soil may be preserved in a state capable of yielding good crops.
- FESSENDEN.
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DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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SIMON BROWN EDITOR.
HENRY F. FRENCH, ASSOCIATE EDITOR.

CALENDAR FOR JANUARY.



OR eleven successive holiday seasons we have been permitted, as Editor, to wish the readers of the *New England Farmer*, a **HAPPY NEW YEAR**, and to express a few thoughts suggested by January, and by the opening of a new volume.

Eleven years! How much of mingled good and ill, of hope and fears, of resolutions and non-performance, of success and failure, is comprehended in this record. At first thought, it seems but a brief period since *January*, 1852, and yet, if we stop to measure it by events and changes of deep interest to ourselves, individually, it will seem much less brief to most of us.

We love to review and contrast these years, and to dwell upon the evidences which they afford of progress and improvement in regard to the soil and the mind, to the field and the house. But upon the commencement of this new period of time, it is both customary and proper to confine our thoughts, mainly, to the incoming and outgoing years.

At this point in the calendar, it is sometimes said that every body thinks; that there is a sort of necessity imposed on us all, to look back on the past, and forward to the future. The name of the first month of the year might imply that mankind

have always begun the year in this thoughtful way. **JANUARY** being derived, as the books say, from "Janus," an old Roman Deity, who presided over the beginning of every thing, opening the year and the seasons, as well as all great gates and doors, and to whom supplications were addressed at dawn of every day, and sacrifices offered at the beginning of every year. This god was represented with two faces, one looking back upon the year past, and the other forward to that to come, and to him was the first day of the year especially sacred.

Whether, then, we contemplate the events of the old year, or look forward to those of the new, our thoughts unavoidably centre around that topic which is first and uppermost in the minds of all.

Our government is at war, but not with a foreign foe. From external enemies it has nothing to fear. The past history of our country has decided two long mooted questions; one as to the capacity of the people to establish a practicable form of self-government; the other, as to their ability to defend it against attacks and opposition from without. A still more important question remains for solution: Can such a government be maintained against the intrigues of the ambitious, the treachery of the unprincipled, and the rebellion of the lawless, among its own citizens? One million of our countrymen have risen up as disputants in this fearful controversy, which is witnessed by an audience to whom the address of the madman, "Attention, the whole world," is but a modest salutation. We can hardly realize that this is no mere "war of words," but a fierce and deadly struggle—a civil war—which has already caused "tears in the houses, as well as blood in the field." Our hope as to its final result, is as firm as our faith in man's capacity for self-government. We cannot believe that the few are always to govern the many, nor that free government has as yet proved a failure.

This, however, is not the time to "talk politics." Our business is with the farm—the farm

in the midst of a New England winter. Rather an unpromising topic, especially where one feels that he has, year after year, given expression to pretty much such thoughts as the same objects will be most likely to suggest again to the same mind.

We have sometimes thought that if editors could agree upon some plan by which occasional "exchanges" might be effected with their "brethren," or by which they could, after the manner of the Methodist ministry, "ride a circuit," so that no one would be compelled to write for the same "people" more than one or two years in succession, our editorials might present a greater variety of thought and novelty of expression. But in the absence of such arrangement, we may rely on the long-tried good nature of our readers to pardon any repetition which they may detect.

Well, then, on this NEW YEAR'S Day, we shall find, if we look into the almanac, that this earth of ours, or, as it appears to us, the sun, commenced his year's work a few days ahead of us; having swept around the southern curve of his track, and passed the half-way station of winter solstice about a week before we arrived at our "place of beginning." The day is already a few minutes longer than at the shortest, but the sun is still so low in the southern sky that we do not expect his approach towards our northern latitudes will sensibly affect the temperature for some time to come. Indeed, experience has taught us to expect, on the contrary, that

"When the days begin to lengthen,
Then the cold begins to strengthen."

And before the month goes out, we usually find that it is full strong enough for our comfort,—or, at least, we are apt to think so, and, perhaps, to grumble about it. We well know that these long winter evenings do tax the patience. Many feel that the history of their lives might be written in two lines:

"Worked hard all summer to raise enough to feed themselves and cattle during winter."

But, do we not complain too much? Is a milder climate, even if at our bidding, desirable? For what section of this earth, after all, would we exchange New England? Since commencing this article, we have read an extract from a work on "The Manners of the Modern Egyptians," in which the writer alludes to some of the effects of climate upon character. Life at Grand Cairo, he says, is rather passive, than active. Nine months of the year the body is oppressed by heat; the soul in a state of apathy, sighs for calm tranquillity. Inaction under a temperate climate is painful; here repose is enjoyment. The most frequent salutation at meeting or parting, is, "*Peace* be with you." The American, born under an ever-varying sky, is

continually receiving new impressions, which keep his mind as continually awake. He is active, impatient and agitated, like the atmosphere in which he exists; while the Egyptian, feeling the same heat, the same sensation, two-thirds of the year, is idle, solemn and patient. Effeminate indolence is born with the Egyptian, grows as he grows, and descends with him to the grave. It is the vice of the climate; it influences his inclinations and governs his actions. The sofa, therefore, is the most luxurious piece of furniture of an apartment. Their gardens have charming arbors and convenient seats, *but not a single walk!*

Such is the testimony of northerners generally who visit southern countries. The Rev. J. S. GREEN, missionary at the Sandwich Islands, whom our readers will remember as the writer of several the *Farmer*, says the Hawaiian fields might "laugh articles on Hawaiian agriculture, published in with abundance," but are fruitful only in noxious or useless weeds. "And yet we all see that the nation is dying out and out, commerce languishing, every thing and every body suffering, because scarcely any one is willing to cultivate the earth." After speaking of the natural indolence of the Islanders, generally, and of the astonishment of the natives, who formerly cut their grain with a *case-knife*, at witnessing the velocity with which one of Hussey's machines marched through a field of wheat, he exclaims: "Dear old New England, land of my birth, of my childhood and youth! well may thy sons be thankful that they were born and cradled among thy hills, instead of first breathing the balmy air of a southern climate. If I have any hardness, any thing like endurance, I owe it, under God, to having felt the bracing atmosphere of the north, and to having become inured to the tug of labor on the hillsides and in the valleys of Vermont."

Let us, then, enter upon a NEW YEAR, thankful for the cold; thankful for the rough admonitions which it gives us to bestir ourselves or freeze to death!

WATER FOR FATTENING SWINE.—A correspondent of the *Rural New-Yorker*, who has tried the experiment of fattening swine with and without water, gives the result as follows:

Last fall I saw in the *Rural* that a farmer said he had proved by experience that hogs would fatten faster, and on a considerable less amount of corn, without drink, so I thought I would try the experiment. I fed sixteen shoats on dry corn for nearly two months without water. They acted like crazy creatures, and a common rail fence would not stop them. They ate but little corn, and I think did not gain a pound. I then gave them all the water they wanted, and I could see they commenced gaining immediately, and were as contented as any hogs. I have proved, to *my* satisfaction, at least, that fattening hogs require water.

For the New England Farmer.

INFLUENCE OF NEWSPAPERS.

MESSRS. EDITORS:—I am now over 82 years old, and remember the wars of this country, from the revolutionary to the insane rebel war of the south. I remember when there were but two newspapers published that reached the country from Boston, viz., the *Independent Chronicle* and *Columbian Sentinel*. The *Chronicle* was the organ of the republican party, and the *Sentinel* the organ of the federal party. Their editors were men of talents, faithful to their parties, not sparing of any invective which would redound to the glory of either cause. My father took the *Chronicle*, and I well remember the account it gave of the struggle which took place at the convention of delegates from the twelve old States while forming the confederacy. The weekly *Chronicle* gave us an illustration of the progress going on at the convention by twelve pictures of prostrate pillars at the beginning of the meeting of the delegates. Each pillar was to represent a State; ten of the pillars advanced from different positions of elevation from week to week, till they arrived at an erect posture; the other two finally became erect after a sufficient course of "compromises."

What a strong impression pictures make upon the minds of children. It is astonishing to witness the progress which newspapers have made from that time to the present in their increase in numbers and vastness of circulation. As long ago as 1787, there were but few newspapers taken in my native town, which would compare with the rest of the towns throughout New England for the encouragement bestowed upon the editors of newspapers at that time. The *Chronicle* or *Sentinel* was taken by the clergyman, the justice of the peace, and perhaps a few others who were able, and fond of reading. Political proclivity made the decision in the choice of newspapers. I presume there are hundreds of newspapers now distributed in the country where there was but one then. At that time (1787,) and for years afterward, each subscriber had to send to the office to get his paper, and when travelling was bad, they would lay behind one or more weeks.

Libraries are useful for standard works, but they will not compare with newspapers for spreading light and knowledge among all classes of people. Where people have the means of being instructed in true knowledge, there is but little danger of their being humbugged by demagogues or secessionists for any great length of time. It has been but a few years since an agricultural paper could be sustained in New England; now there are three or more published in Boston, which are eagerly read and are exerting an influence upon the farming community which is invaluable; they are doing good in various ways; they are a school of instruction to the whole country, except those who are already infallible. Knowledge which formerly could be conveyed only from one individual to another, is now spread broadcast at an impression. The farming interest is held in much higher estimation than formerly, through their means; the correspondents to these papers, though scattered over the country, almost become acquainted. A good liberal newspaper is an angel which scatters light in all our paths. The difference between newspapers of good influences and bad influences

is very striking; the former is governed by the principles of practical Christianity, which tends not to unprofitable controversy, but inculcates the love of peace, charity, and the exercise of good-will among all people, without regard to sect, creed, or denomination. The latter issues scurrility, slander, misrepresentation, doctrinal theories and bigotry, from which grow every evil work, even to persecution for conscience sake. Such papers stir up the evil passions of men even to warfare. Contests much oftener originate from theoretical doctrines founded on absurdity, than from any rational causes. Great is the influence of newspaper editors for good or for evil.

Free schools and free presses are great annoyances to despotism, as well as the safe-guard and defence of liberal principles. In all the States that uphold the free school system, and lay no restraint upon the newspaper presses, but encourage the dissemination of useful knowledge among all classes of people through newspaper reading, there will be but little danger of the predominance of despotism over republicanism. If the free press had even been tolerated with other free institutions for the instruction of the ignorant in the slave States, this calamitous and destructive war would not have taken place. Ignorance is liable to suffer all manner of imposition by shrewd, ambitious, selfish and designing tyrants. While newspapers are allowed to circulate, knowledge cannot be confined to self-important dictators. Success, then, to a free press, and the means of knowledge distributed to all classes of people. SILAS BROWN.

North Wilmington, December, 1861.

TO KEEP RABBITS FROM TREES IN WINTER.—Two years ago I found the rabbits gnawing my choice trees severely. I had seen several remedies recommended, such as tying on strips of lath, bark, wrapping with straw, &c. But I thought some kind of a wash would be much cheaper, and less work to put it on. I took a small quantity of tobacco and made a strong tea of it; then a thick lime whitewash, and stirred in the tobacco. With a brush or swab, a man can wash 1000 in a day. It proved a remedy with me. My rabbits, although uncivilized, are too nice to chew tobacco. If storms wash off the mixture, wash them again. It does not cost much.—S. FOSTER, in *Country Gentleman*.

THE HOMESTEAD.—This paper, published at Hartford, Ct., has been coming to us with great regularity for six years, and ever with sound and cheering words. We have read it with profit, and copied from it into our columns with pleasure. The publisher has discontinued it, finding that, through a "seductive, but most unwise system of credits," he could not get back the outlay which it cost. Its subscription list is to be merged with that of the *American Agriculturist*, which excellent paper is to be sent to the late readers of the *Homestead*. In this union we hope all parties will reap an abundant reward for their valuable labors. Mr. WELD, late editor and publisher of the *Homestead*, we learn, has become an associate editor of the *American Agriculturist*.

For the New England Farmer.

MORE ABOUT THE WHEAT TADPOLE.

After studying the habits of this curious little fellow for two months, he looks tremendous large to me. As the wheat has been threshed, I find it has suffered very much from the depredations of the tadpole and other insects this season. In many of the mountain towns, it is an entire failure, and few have more than half a crop. If one of this class, called the Aphis, has caused so much fear in the cotton-growing States, and called out so much talent to investigate its nature, why are we not awake? If he progresses as fast as pests generally do, we shall have famine with our war, another year, unless we are trying to head him off.

I am conversant with the opinions of many who have devoted much time to the study of the Cotton Aphis, his character, habits, &c., and consider Townsend Glover's description in the Patent Office Report for 1855, pages 68 and 69, the best of any—still I am not satisfied with that even. I have seen his lady-birds, lace-flies, syrphus and ichneumon on many pieces of grain, before I ever saw a wheat tadpole, and have seen that they were increasing yearly. This year I saw uncountable numbers of them on the grain in various places, and watched them closely for weeks, but I think only the lace-fly preys upon the tadpole in any way.

The other day I strolled up to the stock farm of — Cushing, of Belmont, situated in Wayland. His farmer told me they raised 200 bushels of Java wheat this season, and while talking with him in relation to it, I made the following discovery. Said farmer told me the things came on to their wheat late, and did little, or no harm. That when they cut it, there was not one to be found on it; that they put it into a mow overhead, and about two weeks after, he was up there after hen's eggs, and, as he supposed at the time, got completely covered with hen-lice. In another week he was up there again, and there were bushels of the same things all over every thing, of all sizes and colors, with wings and without wings; that he watched them closely, and found them swarming about the windows trying to get out as soon as they got their wings; that in four weeks after he first saw them, looking like the smallest hen-lice, the barn and everything in it, was literally covered with a small, greenish worm, and the things had turned into them; that the worms were crawling everywhere, homeless and perfectly desperate, on a small scale, like *Secessia* at home; that after awhile, they made cocoons out of hay, &c., and were drying up in them. He gave me some of these worms at home, and some without homes, and I will send you a sample of both. I found, upon examining the dried up ones, two very small white, or yellowish white wheat tadpoles to every dried up maggot, male and female—the farmer's hen-lice. This time the maggot changed to male and female wheat aphids—before the eggs hatched one which we see mated according to mythology—though my microscope ain't strong enough to see the worm's ribs, if it has any.

Now, Mr. Editor, are these a secession element, that can live and thrive on nothing, and sent up here to destroy our "staff of life?" I think here is a chance for some of us "stay at home guards" to make ourselves useful. The farmer is *backer* to all undertakings, though he may be despised by

some because he will not turn his plow into a cannon. He is needed at home, and should be awake and doing. If any impediment appears to battle with, study well where to strike the surest blow, and then strike as none but the farmer can. I think we ought to be getting ready to do battle with some of the newly arrived, but troublesome guests.

No doubt the wheat tadpole is a relative of the sugar maple destroyer, the apple tree leaf destroyer, &c., and that their habits are not known, or the extent of their depredations. I think them of different species from Mr. Glover's Aphis, though they may belong to the *secessia* genera.

There is no doubt that the larva was in the straw or head on the Cushing farm, and carried into the barn there, and that it was carried in with all grain where the tadpole appeared, whether he did damage this season or not. That particular barn may give Mr. Cushing's cattle the pleuro, and his horses the glanders, or cribbing, or some other horrible disease—but it has brought out the tadpoles—as his farmer said—several months before their time. It is a perfect unventilated hot-house, and these mischievous pests, or any other, can breed and thrive there.

In most other barns the egg would have laid till spring or early summer, and then hatched out. Now, will anything but fire and sword exterminate them?

Let us think about it directly, and act. Don't appoint a Fast and wait while the Lord destroys them. Take hold right and strong

Wayland, Nov. 4, 1861.

K.

For the New England Farmer.

IS FARMING PROFITABLE?—GARGET—BLIND STAGGERS.

MESSRS. EDITORS:—I have often noticed the following questions in your valuable paper:

1. Is farming profitable?
2. What will cure the disease in cows, called "garget?"
3. What will cure a swelled or tumefied bag, or udder?

The affirmative to the first question depends on three things; the price paid for the land—quality of soil tilled—and thirdly, *brains*, a very necessary accompaniment to secure success in *any* business.

I would call your attention to the following results, from the cultivation of 3½ acres—a field no better than fifty other acres of my farm, the whole of which had previously been pastured for forty years.

In the spring of 1857, plowed and planted to potatoes (without manuring) 3½ acres, and harvested a good, fair crop. In 1858, put on forty cart-loads barn-yard manure, planted to corn, and harvested good, fair crops. In 1859, same quantity manure, sowed broadcast three bushels of salt, planted corn, putting on a handful of ashes on each hill, and raised a large crop of corn. In 1860 sowed seven bushels of wheat, started to clover and herdsgrass, and took off the same fall seventy bushels of wheat, and three tons of good hay. I sold the wheat at \$1 75 per bushel for seed. In 1861 I have taken off thirteen tons, by weight, of good hay. Has it not been profitable? Beat this who can. I cannot speak for any other farmer,

but *my* farm, farmed at the halves, pays me eight per cent.

The disease called "garget" commences in the horns and head. Besmear the top and back part of the head and around the roots of the horns, with warm tar and rub thoroughly; if it fails to effect a cure, report the failure, and it will be the *first* to my knowledge.

To cure swollen, or tumefied udders or bag, wash clean with warm soap-suds, then rub *thoroughly* with pure bee honey, and a cure will be effected in twenty-four hours generally; sometimes it may be necessary to repeat the operation. The above is the *very* best application for women suffering as above.

To cure the "blind staggers" in swine, make an incision about three inches long through the skin on the forehead; pull up the skin on each side, fill with fine salt, and the cure is effected immediately.

GEO. B. GREEN.

Windsor, Vt., Nov., 1861.

WEIGHTS AND MEASURES

OF VARIOUS FARM PRODUCTS AND OTHER THINGS,
IN VARIOUS COUNTRIES.

In England and America grain is generally rated by the bushel, though it is not the same measure; for here we use the Winchester bushel, which contains 2,150 42-100 cubic inches. There, since 1862, the legal measure is called the imperial bushel, which contains 2,218 cubic inches; so that 32 of their bushels are about equal to 38 of ours.

The following are the commercial weights of a bushel of different articles, viz: Wheat, beans, potatoes and clover seed, 60 pounds. Corn, rye, flax seed and onions, 56 pounds. Corn on the cob weighs 70 pounds; buckwheat, 52; barley, 48; hemp seed, 44; Timothy seed, 45; castor beans, 46; oats, 35; bran, 20; blue grass seed, 14; salt, 50, according to one account, but Onondaga salt is 56, (the real weight of coarse salt is 85 pounds to the bushel;) dried apples, 24; dried peaches, 33, according to a table lately published in numerous papers, but according to our experience both are wrong. We have seen thousands of bushels sold at 22 pounds to the bushel, which will measure about three pecks.

Heaping Measures.—Potatoes, turnips, and esculent roots, apples and other fruits, meal, bran, and in some States oats, are sold by heaping measure, which contains 2,815 cubic inches.

Barrel Measure.—Rice, 600 pounds; flour, 196 lbs.; powder 25 lbs.; cider and other liquids, 30 gallons; corn, 5 bushels, shelled. By this latter measure crops are estimated, and corn bought and sold throughout most of the Southern and Western States. At New Orleans, a barrel of corn is a flour barrel full of ears. In some parts of the West it is common to count a hundred ears to a bushel.

Ton Weight and Ton Measure.—A ton of hay or any coarse bulky article usually sold by that measure, is twenty gross hundred: that is 2,240 pounds; though in many places that ridiculous old fashion is being done away and 2,000 pounds only counted to a ton.

A ton of timber, if round, consists of 40 cubic feet; if square, 54 feet. A ton of wine is 252 gallons.

A quarter of corn is the fourth of a ton, or eight imperial bushels. This is an English measure, not in use in this country, though very necessary to be known so as to understand agricultural reports.

Troy Weight and Avoirdupois Weight.—One hundred and forty-four pounds avoirdupois are equal to 175 pounds Troy—175 ounces Troy are equal to 192 ounces avoirdupois. All precious metals are bought and sold by Troy weight.

The kilogramme of France is 1,000 grammes, and equal to 2 pounds 2 ounces, 4 grains avoirdupois.

A chaldron of coal is 58½ cubic feet, generally estimated 36 bushels. A bushel of anthracite coal weighs 80 pounds, which makes the weight of a chaldron 2,880.

Weights of a Cubic Foot.—Of sand or loose earth, 95 pounds; compact soil, 124; a strong or clayey soil, 127; pure clay, 135; mixture of stones and clay, 160; masonry of stone, 205; brick, 125; cast iron, 450; steel, 489; copper 486; lead, 709; silver, 654; gold, 1,203; platina, 1,218; glass, 180; water, 62; tallow, 59; cork, 15; oak timber, 73; mahogany, 66; air, 0,0753. In the above, fractions are disregarded.

A bale of cotton, in Egypt, is 90 pounds; in America, a commercial bale is 400 pounds, but is put up in different States varying from 280 to 720 pounds. Sea Island cotton is put up in sacks of 300 pounds.

A bale of hay is 300 pounds.

A cord of wood is 128 solid feet, usually put 8 feet long, 4 feet wide and 4 high.

A perch of stone is 25 cubic feet, piled, or 22 in the wall.

Lime and sand to a perch of stone—three pecks of lime, and two-thirds of a one-horse cart load of sand.

Weight of Lime.—A bushel of limestone weighs 142 pounds; after it is burned, if weighed directly from the kiln, 75 pounds; showing that 67 pounds of carbonic acid and water have been driven off by fire. This bushel of lime will absorb 20 pounds of water, gradually applied during several days, and will then be in a state of dry powder, weighing 93 pounds; showing that 18 pounds of water have been converted into a solid, dry substance.

To Measure a Ton of Hay.—One hundred cubic feet of hay, in a solid mow or stack, will weigh a ton.

Compute Weight of Cattle by Measure.—Ascertain the girth back of the shoulders, and the length along the back, from the square of the buttock, to a point even with the point of the shoulder-blade; say the girth is 6 feet 4 inches, and the length 5 feet 3 inches, which multiplied together, gives 31 feet. Multiply this by 23, the number of pounds allowed to the foot, between 5 and 7 feet girth, and the result is 713 pounds, for the number of pounds of beef in the four quarters. Girths, from 7 to 9 feet, allow 31 pounds to the foot. Cattle must be fat and square built to hold out weight.

To Measure Grain in Bins, multiply the length and width together, and that product by the height in cubic inches and divide by 2,150, and you have the number of bushels.

To Measure Corn in the Ear, find the cubic inches as above, and divide by 2,815, the cubic inches in a heaped bushel, and take two-thirds of

the quotient for the number of bushels of shelled corn. This is upon the rule of giving three heaping half-bushels of ears to make a bushel of grain. Some falls short and some overruns this measure.

Board Measure.—Boards are sold by face measure. Multiply the width in inches by any number of pieces of equal length, by the inches of the length. Divide by 144, and the quotient is the number of feet, for any thickness under an inch. Every fourth-inch increase of thickness adds a fourth to the number of feet in the face measure.

Land Measure.—Every farmer should have a rod measure, a light, stiff pole, just $16\frac{1}{2}$ feet long, for measuring land. By a little practice he can learn to step just a rod at five steps, which will answer very well for ordinary farm work. Ascertain the number of rods in width and length of any lot you wish to measure, and multiply one into the other and divide by 160, and you have the number of acres, as 160 square rods make a square acre. If you wish to lay off one acre square, measure 13 rods upon each side. This lacks one rod of being full measure.

Government Land Measure.—A township is six miles square, and contains 36 sections, 23,040 acres. A section, one mile square, 640. A quarter section, half a mile square, 160 acres. As this is 166 rods square, a strip one rod wide, or every rod in width, is an acre. A half-quarter section is half a mile long, north and south, almost universally, and a fourth of a mile wide, 80 acres. A quarter-quarter section is one-fourth of a mile square, 40 acres, and is the smallest sized tract, except fractions, ever sold by the government. The price is \$1.25 an acre.

Measure of a Mile.—Our measure of distance is by the standard English mile, which is 5,280 feet in length, or 1,760 yards, or 320 rods. An English geographical mile is equal to 2,050 yards.

Scripture Measure.—"A Sabbath day's journey" is 1,155 yards—about two-thirds of a mile. A day's journey is $33\frac{1}{3}$ miles. A reed is 10 feet $11\frac{1}{2}$ inches. A palm is 3 inches. A fathom is 6 feet. A Greek foot is $12\frac{1}{2}$ inches. A cubit is 2 feet. A great cubit is 11 feet.

As the superficies of all our States and counties are expressed in square miles, it should be borne in mind that the contents of a mile is 640 acres.

Number of Square Yards in an Acre.—English, 4,840; Scotch, 6,150; Irish, 7,840; Hamburg, 11,545; Amsterdam, 9,722; Dantzic, 6,650; France, (hectare,) 11,960; Prussia, (morgen,) 3,053.

Manure Measure.—This is generally estimated by the load, which is just about as definite as the phrase, "about as big as a piece of chalk." It ought to be measured by the cubic yard or cord. A cubic yard is 27 feet, each of which contain 1728 cubic inches. A cubic cord is 128 cubic feet. As the most of farmers have an idea in their minds of the size of a pile of wood containing a cord, they would readily compare that with the quantity of manure, if stated in cords. Every cart or wagon-box, before it leaves the maker's shop, ought to have the cubic feet and inches it will contain, indelibly marked upon it. This would enable the owner to calculate the amount of his load of grain, roots, earth, stone or manure.

Weight of Manure.—A solid foot of half rot-

ted stable manure will weigh, upon an average, 56 pounds. If it is coarse or dry, it will average 48 pounds to the foot. A load of manure, or 36 cubic feet, of first quality, will weigh 2,016 pounds; second quality, 1,728 pounds. Weight to the acre—Eight loads of first kind, weighing 16,128 pounds, will give 108 pounds to each square rod, and less than $2\frac{1}{2}$ pounds to each square foot. Five loads will give 63 pounds to the rod. An acre containing 43,560 square feet, the calculation of pounds per foot, of any quantity per acre, is easily made.—*The Plow.*

For the New England Farmer.

RETROSPECTIVE NOTES.

GYPSUM.—The attentive readers of this journal must have noticed an article with this heading which appeared, first in the weekly issue of Sept. 21st, and subsequently in the Nov. No. of the monthly edition. In it the reader is directed to sprinkle a small quantity of gypsum, more commonly known as plaster, or plaster of Paris, every morning, over his cattle stalls. And this direction is followed by the statement, that plaster is a good absorbent of ammonia, and consequently tends not only to economise a most valuable element of vegetable nutrition—namely, the ammonia—but also to sweeten and purify the air. These being the objects to be secured by the sprinkling of gypsum, readers who reflect upon what they read, and endeavor to make a *practical application* of every fact, truth and principle which may come under their cognizance, will hardly fail to come to this conclusion, namely, that if gypsum is of service in fixing or absorbing the ammonia in *cattle* stalls, and in purifying and sweetening the air of places where cattle are stabled, it must be much more serviceable to the stalls and stables of *horses*, as there is always much more ammonia developed from the urine and dung of horses than from those of cattle.

To be convinced of this fact, that there is a much larger amount of ammonia developed in horse-stables than in cattle-stables, one has only to compare his sensations when he first enters the one and the other, when first opened in the morning. On first entering a close, unventilated horse-stable, he will experience a disagreeable pungent smell in his nose, and more or less of a smarting sensation in his eyes, somewhat resembling that which is felt when a bottle of hartshorn or of smelling salts is opened in close proximity to the nasal and visual organs. On the other hand, when first entering in the morning a similarly close and unventilated stable for cows or cattle, very little, or none at all, of this pungency will be felt, even though the atmosphere may be quite disagreeable through the impurities derived from the exhalations arising from the lungs, the skin, and the excrements of the animals confined therein. This difference is owing to the much larger amount of ammoniacal vapors in the former case than in the latter.

It appears, then, that so far as the two objects, for which gypsum is directed to be used, are concerned, the horse-stable needs attending to still more than the cattle-stable. Ammonia is more largely and more speedily set free in the former than in the latter. So let us consider both, as *generally constructed and managed*, much in need of

having something done for them. For, certainly, something ought to be done when the creatures committed to man's care are shut up in stables so ill-constructed and managed that they are obliged to live and breathe in an atmosphere so foul and unwholesome as to injure seriously their health and constitutional vigor, and to render them much more liable to the attacks of disease. *Something ought to be done* when animals are shut up in an atmosphere which no man could breathe in for many whole nights in succession without an attack of disease in his lungs or elsewhere. Something ought to be done, too, when ammonia—the most valuable element in the farmer's manure—is taking to itself wings and flying away.

When a farmer to whom thinking is not, as it is to so many, a dread and difficulty, takes these things into consideration, the inquiry will naturally arise—

WHAT OUGHT TO BE DONE TO IMPROVE OUR STABLES IN THIS RESPECT?—In a good many agricultural publications, as well as in Liebig's Agricultural Chemistry, Stockhardt's Chemical Field Lectures, Nash's Progressive Farmer, &c., he will find directions similar to those in the article now under notice, assuring him that sprinkling plaster in his stables will absorb the escaping ammonia, converting the volatile carbonate into a fixed or non-volatile sulphate of that valuable fertilizing element, and will also purify and sweeten the air. But doubts of this assertion cannot fail to arise in his mind when he reads in the same or other chemical authorities, that *dry* plaster cannot act upon ammonia; that it can produce the above results only in a state of solution, and, farther, that to dissolve plaster four hundred times its own weight of water must be added to it. He will see at once that if it requires four hundred pounds or pints of water to dissolve one pound of plaster, and thus reduce it to a state in which alone it can act on the ammonia escaping from his stables or his manure heap, but a very insignificant portion indeed of the plaster, which the authorities referred to have directed him to sprinkle in his stables or over his manure heap, can possibly accomplish anything towards the desired result. These doubts will be still farther strengthened when he finds, as he may, in some of the best agricultural journals, both in this country and in Great Britain, that others as well as himself have become skeptical as to the property usually ascribed to gypsum when merely sprinkled in the *dry* state upon the floor of a stable, or upon a manure heap. Several expressions of such doubts or skepticism have appeared, within a year or two, in the pages of the *Country Gentleman*; and positive denials of this asserted property of gypsum have appeared in other journals. For example, the *North British Agriculturist* about a year ago asserted that gypsum "is found in practice not to be a good fixer of ammonia in stables, byres (cow-houses,) &c." Again, a very good authority in matters connected with agricultural chemistry says, in the volume of the *Genesee Farmer* for 1857, after stating objections to the plans of fixing ammonia by the use of diluted sulphuric acid, and of a solution of copperas, that gypsum being cheap and easy of application, would be excellent for the purpose but for this one fact, viz., "Plaster, *unless in solution, will not* convert the carbonate of ammonia into a sulphate of ammonia. Scattering dry or moist plaster on the manure

heap, then, is of little use." How Liebig came to make such a blunder is then explained, as also how naturally it has happened that one writer has copied it after another, until now it is to be found in almost every agricultural book and periodical in this country.

Now, if all these statements from respectable journals in Great Britain and in this country are to be received as authoritative, then chemists and farmers are once more "out at sea" in regard to the absorption of hartshorn or ammonia in stables and manure heaps. We are sorry that it is so, as the sprinkling of a little gypsum would be so easy and so cheap a method of preventing the escape and loss of thousands of dollars' worth of ammonia from every State in the Union. But if farmers have been trusting to a delusion, it is better that they should have it pointed out to them, than that they should continue any longer laboring under a mistake. For, when it becomes settled, established, and more widely known that gypsum sprinkled as usually directed, *will not* absorb the ammoniacal effluvia of stables and manure heaps, farmers and chemists will begin anew to make search for something that will certainly effect this object. And it is as a contribution to this reconsideration or reinvestigation of the question as to what is to be done to save the ammonia and to destroy or deodorize the foul air of our stables, that this article has been written. Copperas water or a solution of copperas is certainly a good deodorizer, but it is open to the objection that the presence of iron in manure will occasionally, if not always, be injurious.

Dry muck and sawdust are the most efficient absorbents of ammonia which we have tried in the stable; and we have seen the fumes of a manure heap speedily arrested by sprinkling on it half an ounce of strong sulphuric acid, diluted with a pailful of water. Who will tell us of a better way?

MORE ANON.

For the New England Farmer.

LUCERNE.

MR. EDITOR:—I was pleased to see your article on Lucerne in your last number of the *Farmer*. I think its value to our farms has been overlooked. That it is a very valuable plant in many localities, admits not of a doubt. For soiling, I think it will be found the most useful plant that we can use. My experience with it is, however, limited. I bought a farm in Rhode Island, that had a few rods of lucerne, mixed in with other grasses, and had not a fair chance to grow to perfection. As it was, it would start up much earlier than other grass, and be ready for cutting, near three weeks sooner. When I broke up the field, I found it almost impossible to plow through it, the roots were so tough and strong. Most of the plants would draw through an eight-inch furrow, holding on so hard as in many cases to cause the plow to slide around them. I dug up a single root in the garden, that had been cultivated in a flower-bed, which weighed, after laying through a hot June day, on the flagstones the south side of the barn, over twenty-eight pounds. It was weighed by a neighbor, who thought it would have much exceeded thirty pounds previous to its being wilted. There were several hundred stalks, many of them over six feet in length. The root at the crown was near six inches

through, tapering down as large as a man's arm. It was cut off about two feet below the surface.

A gentleman at Adamsville, Little Compton, R. I., for a number of years cultivated lucerne, and cut it two and three times each season, according as the moisture might be. He used it as a hay crop, and thought it the best grass he could use. English writers give us very precise directions as to the best mode of preparing the soil for the seed, many of which are far too expensive for our adoption, and I think entirely useless. If the soil has been well worked and manured for previous crops, and the subsoil is not too hard, I think we need not fear but that it will grow, if not too wet a soil. No plant will stand a long drought better, as we have instances recorded where clover has died, and lucerne held out and made a good crop. Mr. Young tells us, the first use of this plant is that of soiling horses in the stable; for this purpose, no other article of food agrees so well with those animals; nothing better for oxen, cows, young cattle and even hogs in a farm-yard. He also thinks it well adapted to fattening beef.

Chili clover is, I think, well worth experimenting with by those who have the means of doing so. It is near allied to lucerne, and, in many respects, resembles it. Its roots deep and strong, sends out an abundance of stalks, which, in a rich soil, will often grow to a wonderful length. Four years since, at the solicitation of a seed-dealer in New Bedford, I took off his hands some of this Chili clover seed, which I sowed on about one-third of an acre. It did not come up well, owing, I think, to its being damaged by the sea voyage. I plowed up the piece, but some of the plants by the side of the wall escaped, and have remained ever since. They grew rapidly and matured early, and could be cut two or three times in a season. I have no doubt it would be a good soiling, hay, or pasture crop. I have spoken of its stalks growing to a great length. I will here say that, in 1850, I furnished Commodore Jones with specimens of the wild oat of California, and also a clover plant which I think the same as the Chili clover. The stalks of this plant exceeded twelve feet. The Commodore forwarded them to the New York State Agricultural Society.

Rochester, Mass., Nov. 18, 1861. O. K.

KEEPING APPLES---NEW METHOD.

Mr. M. R. Thompson, of Mifflin county, Pennsylvania, in a letter to the *American Agriculturist*, describes his method of keeping choice apples, which appears to be worth noticing. He packs them in barrels or large boxes, surrounding each apple with common dry ground gypsum (plaster of Paris.) This is readily done thus: Put into the bottom of the barrel, or box, an inch of the plaster and then a layer of apples, keeping them from contact with each other, and an inch from the side all round. Sift in more plaster to fill up the spaces and cover the whole nearly an inch. Then add another layer of apples and more plaster, and so on to the top. The plaster employed is, we suppose, the common ground plaster for fertilizing—not the calcined used for making casts, models, etc. The former is cheap in most parts of the country, costing from \$3 to \$10 per tun. Of course the plaster is just as good for application to the field after being used during winter for

packing apples. The plan is worthy of trial at least, for it would appear reasonable that the fruit thus surrounded with a compact mass of dry powder, should keep almost as well as if hermetically sealed. Mr. T. says he keeps pound pippins thus packed, in good order until the following June. We judge from a remark in his letter, that he does not store them in a cellar, but in any cool room of the dwelling or out-house. We are not certain whether the dry plaster would be a sufficient non-conductor to keep frost out, if exposed to severe cold—especially from the fruit near the outside of barrels.

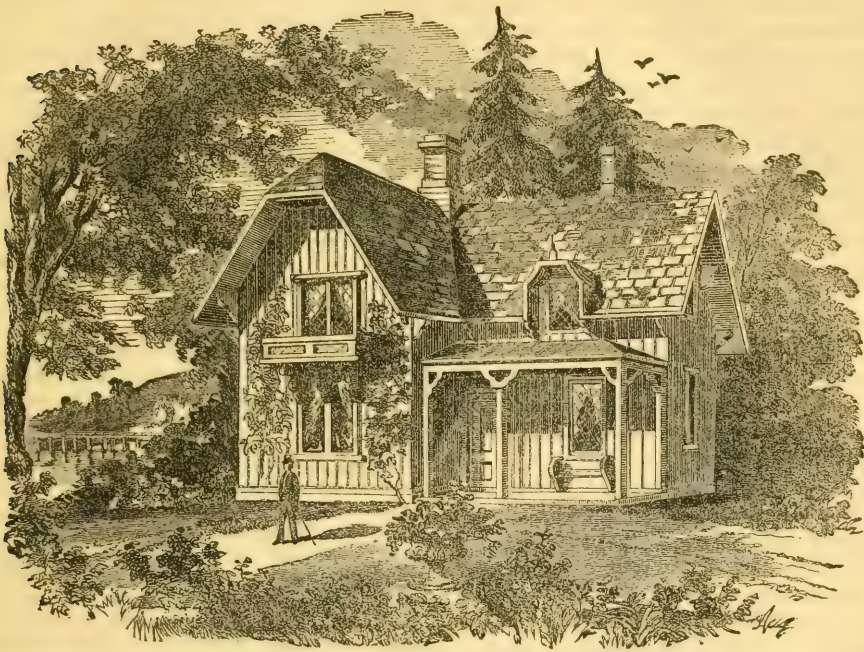
For the New England Farmer.

SEED CORN.

MR. EDITOR:—A few weeks since, at a meeting of the American Institute Farmers' Club, in New York city, they had a discussion upon seed corn. Much diversity of opinion prevailed, clearly showing that the subject was involved in much uncertainty, owing to the want of carefully conducted experiments, persistently followed up, for a succession of years, or at least long enough to positively settle the matter on a true basis. Some thought best to reject the small end of the ear alone; others would include the but, and plant only the middle; others reject the but, and use the balance; while some prefer the small end to any and all the rest of the ear. There seemed to be a general agreement that it is a good practice to select in the field the first ripened, well matured, two eared stalks, in order to have succeeding crops earlier, and increase the number of ears on a stalk. One man stated that he had known the selection of two or more ears on a stalk for seed to be persisted in until the result was that a yield of six and seven sound ears on one stalk was not unusual, but with a loss to the producer, in the diminished size of the ears.

These men, as a class, are probably some of our most extensive farmers, and above the average in intelligence, and possess superior advantages for observation, and yet we see what a conflict of views are entertained respecting a question of permanent importance to every corn grower in the country. It is more than probable that we have men in our farming communities who are capable, and have the means of carrying out experiments in this matter to satisfactory results. None need to suppose that it will be a money remunerating undertaking, but the reverse. A higher and more benevolent motive must prompt the act. Suppose the gain by reason of the proper settling of this question should be only three bushels of corn to the acre, (I think it will much exceed that,) it would add to the aggregate corn crop of the country millions of bushels. I have been inclined to the opinion that as the small end of the ear grew last, and was generally not so well filled as the but, that it did not mature so well, and consequently would not germinate so vigorous a plant, nor produce so abundant a crop. Of one thing I am quite sure, viz., that by selecting the first ripened two eared stalks for seed, the succeeding crops will be earlier and larger in yield. I hope this subject will be thoroughly investigated, and the true practice established so decidedly that none can doubt or cavil about the matter.

O. K.
Rochester, Mass., 1861.



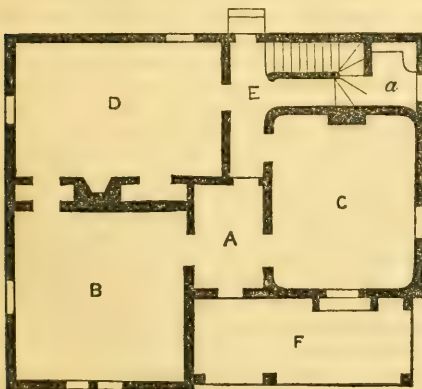
RURAL ARCHITECTURE.

DESIGN FOR A COUNTRY RESIDENCE, BY GEO. E. HARNEY, LYNN, MASS.

DESIGNED AND ENGRAVED EXPRESSLY FOR THE NEW ENGLAND FARMER.

In continuation of our series of hints for Rural Improvements, we offer at this time a design and plan for a suburban cottage of moderate size and cost. It measures thirty-one by thirty-six feet on the ground, and is one and a half stories high, with square rooms below, and good airy chambers, well ventilated, on the second floor.

Plan.—The front door—the upper half of which is glazed—opens into a vestibule, A, six feet wide,



and nine feet long. From the rear of this a passage extends to the staircase hall, F, which opens

out to the yard, or into a wood-shed, if desired. B, the parlor, is fifteen feet square, and is well lighted by a mullioned window in front, and a single window at the sides. It connects by means of a small passage with the living-room, D, (this passage might be converted into a closet—thereby entirely separating the parlor from the living-room.) This living-room is twelve by seventeen, and opens into the staircase hall at a point convenient to the back entrance to the house. Across the hall, and near the head of the cellar stairs, is a good sized closet or store-room, *a*, fitted up with shelves and cupboards, and lighted by a single window. (Owing to a mistake in drawing, the perspective view shows only one window on this side of the house, instead of two, as there should be—see plan.)

The sitting-room, C, measures thirteen by fifteen, and has two doors, one opening into the vestibule, and the other into the passage back of it.

The second floor is divided mainly like the first, and comprises three chambers, a bathing-room, and five closets—besides the hall. The chamber over the parlor is lighted by a dormer window at the side, and a mullioned window in the front, with swing sashes opening out upon a pleasant balcony shown in the perspective.

Interior Finish, &c.—The finish of the interior

of this dwelling is to be in the plain, simple cottage style, with no attempt at ornamentation, by means of intricate detail work. The stock should be of good No. 2 pine throughout. The finish of the windows and doors is to be a plain architrave, with a simple cap moulding above. The base in the parlor, sitting-room and hall, is to be nine inches high, with a simple moulding above—and in the other rooms, eight inches high, beveled on top.

The parlor chimney-piece may be a marble slab, supported on neat bronze brackets—and in the other rooms, the mantles may be of wood. The walls are to be lathed and plastered, and finished for papering.

All the standing finish throughout the house is to be oiled and varnished. The kitchen floor, sink, &c., closet and bathing-room floors and closet-shelves, should have two coats of lead and oil paint of suitable colors.

Exterior.—The exterior of this house, as will be seen by the perspective view, has some ornamental features, which, though not absolutely necessary, add to the convenience, and we think heighten the artistic effect of the design. Thus—the balcony—while it affords a pleasant retreat for the occupant of the chamber to which it is attached—serves also as a hood, shielding the parlor windows from the sun; and the veranda shelters the front entrance to the house, and fills up what would otherwise be a blank, cheerless space, combining use with ornament. Then, too, the widely-projecting eaves—the heavy brackets—the dormer windows and truncated gables, are all simple methods of giving character to the design, and, in order to produce proper effects, care should be taken that these ornamental details be executed in a substantial manner, of heavy stock, and not of the useless inch board stuff, which commonly finds its way into such places, to the great discredit of the builders.

The outside of this house should then be painted with at least two different tints of lead and oil paint, the color of the trimmings being a few shades darker than the main body, unless the main body be quite dark—in which case the trimmings should be lighter, the object being to obtain a contrast between the two. For this house, we would recommend a fawn or a light freestone color for the vertical boarding, and a darker tint like that of the common brown freestone for the trimmings. The window-sashes should be drawn bronze green, and the outside doors grained and varnished.

The cellar is seven feet six inches high in the clear, the principal floor is ten feet in height, and the attics are also ten feet in the centre, and five at the eaves, the posts being sixteen feet long.

The walls are to be covered with vertical boarding and heavy battens, and the roof with cedar shingles.

Cost.—Built in the above manner, and finished throughout, this cottage would cost from \$1500 to \$1700.

For the New England Farmer.

A NEW ERA FOR CHILDREN---THE PROSPECT BRIGHTENING.

MY DEAR SIR:—Something over twenty years ago I wrote a series of articles for the old *New England Farmer*, on the advantages of a knowledge of the natural sciences to farmers. The time that has elapsed since then, and the experiences I have met, have only served to impress the facts I then attempted to utter, more strongly upon my mind. Many others have viewed the matter as I have done, but how to bring the thing about, so that young farmers could obtain a knowledge of these sciences, has been the question. Some have proposed agricultural colleges, with learned professors, as the best means of accomplishing the end. In a few States, such colleges have been established, and I am happy to believe they are meeting with gratifying success.

But colleges cannot meet the wants of every one. There always have been, and always will be, a great many boys in the country, whose capacities are bright, and whose desires of knowledge are equal, and often superior, to those in more favored circumstances, to whom the doors of the great colleges are closed. They cannot afford the time, or the means of obtaining education there. Then there are the girls; the black-eyed and the blue-eyed, laughing girls. They are as fond of knowledge as the boys, and their capacities are as bright, and their application in the pursuit of instruction are often greater than that of the more daring sex.

It was a noble act in the formation of our government that established the common school system of education, a system that, to a great extent, is capable of supplying the necessities of so large a portion of our population, who, without them, would be very limited in their means of acquiring knowledge.

It is one of the pleasing features of this age of progress, the improvements that are being made in every department of those institutions which have appropriately been denominated "the people's colleges." We are having better school-houses, spacious, comfortable rooms, well ventilated, well warmed in winter, with beautiful yards attached, in the places of the little, cramped up, smoky, dark, dingy rooms, located on the corner, so near the public way, as to cause the traveller to become a nuisance to the school, and too often the school a nuisance to the traveller. We are having teachers educated to their business, in the place of those who formerly taught a few winters, or a few summers, just to make the most of time in portions of their lives when this employment could be followed without injury to the main business of future years, and instead of the frequent changes once so often made in teachers, in our best schools, the best are obtained and retained in their position as long as possible.

How few of our readers can follow the memory back to the days when Webster's old Spelling-Book, the American Preceptor, or "the Third Part," Morse's old Geography, with two maps, one of the World, and one of North America, Webster's

or Murray's Grammar, and Pike's Arithmetic, constituted the encyclopædia of common school literature. These were all good books in their day, and very many good scholars gained good educations in the several branches upon which they treated, by the hard study that opened their mysteries. But what a contrast they afforded to the school-books of the present time! I have often thought that I would like to have the scholars of 1861 see the books used at the commencement of the present century, a few of which, treasured by careful hands, have fallen to my possession.

Great as this improvement has been, the ball is still rolling on, and I hope it will continue to roll until a higher degree of excellence is attained than the public has yet anticipated, though I must admit that an advancement in the matter of reading-books has recently been made by Marcius Wilson, and published by Messrs. Harper, of New York, entitled the "School and Family Readers." A great excellency of the more advanced of these readers, is, that in the place of much of the matter usually introduced into reading-books, of which the scholar learns little, and cares less, they are interspersed with subjects of natural history, much of which comes with the every day's observations of the pupil, and will be of benefit and interest all the way through life. For instance, the science of Human Physiology, has a place, written in an every-day, familiar style, and copiously illustrated. So of Vegetable Physiology, and Botany, Ornithology, Entomology, Ichthyology, or the science of fishes, Geology, Philosophy, Physical Geography, &c., all familiarly treated, and beautifully illustrated.

This work strikes me favorably, from the fact, that while the scholar is learning to read, he is at the same time becoming acquainted with his own organization, and the natural productions of the world in which he dwells, many of which are formed for his benefit. Some of them are annoyances, and all worthy of his careful study and attention.

I wish the work a general introduction into our schools and families, from a confident expectation that it will introduce a new and beautiful feature in our educational system, and one of great interest and practical utility to the student.

In addition to the above series of reading-books, our young friends are blessed in the publication of another volume by Messrs. Swan, Brewer & Tileston, of Boston, entitled, "Manual of Agriculture," a work got up expressly as a text-book for common schools. It was a much needed work, and its use in schools and families cannot fail to introduce a beginning of agricultural knowledge and agricultural improvement in a new and hopeful field, the minds of children and youth. I anticipate much good from this work. In commendation of it, it is only necessary to say it was prepared by GEORGE B. EMERSON and CHARLES L. FLINT, names that carry evidence in themselves that the book is a good one.

I should certainly rejoice to see all the above works introduced into all of our New England schools. They are already in some of them. But if any school neglects to get them, I say to parents in such districts, you cannot give your children a better holiday present, than the Manual of Agriculture, or a copy of Harper's School and Family Readers.

W. BACON.

Richmond, Nov., 1861.

OYSTER SHELL LIME.

Not being able to dress our lands last spring as we desired to do, just before the second hoeing time we procured a quantity of *oyster shell lime* of Mr. JAMES GOULD, of this city. It did not arrive in season to be applied before the crop was hoed, but was added after the hoeing had been completed. It was then applied to part of a field of potatoes, at the rate of a handful to the hill,—that is, as much as a man could grasp,—and scattered in among the tops. The potatoes were all on the same quality of land, and nearly on the same level. We passed through the field many times during the growing season, but observed no difference in the appearance of the tops, and rather came to the conclusion that the application of the lime had exerted little or no influence upon the crop. Returning home, one evening, we found a cart-load of potatoes at the bulkhead which were as even in size and as fair and beautiful in appearance as any we ever saw. The potatoes were of the variety called the "Riley," or "Dover," or what are well known by the Irish people as the "*Irish Cup*,"—so called because the eyes are so deeply indented.

"Well, Darby," said we to the man who had dug them, "that is a very fine load."

"Yes, sir," he replied, "you never have seen better."

"Was there any difference in the crop between the limed and unlimed?"

"Yes, as many again where the lime was put."

"As many again in number, or in pounds, do you mean?"

"There are twice as many pounds where the lime is."

Beside the size and fairness of the potatoes, they are exceedingly fine flavored, though we believe that is generally the case with the potato crop this year. If we plant potatoes again, we shall resort to the lime. We shall spread from five to twenty bushels per acre over our old pastures, mowing lots, and about fruit trees. From some inquiries and investigations made, we have come to the conclusion that well prepared oyster shell lime is more valuable for our lands, than stone lime.

HOVEN IN CATTLE.—This disease is usually brought on by cattle being removed from confinement and winter feeding to the luxuriance of the clover field. In the article on *Veterinary Science* in the new *Encyclopædia Britannica*, the oils of linseed and turpentine are stated to be nearly a specific. For a large animal take linseed oil raw, one pound; oil of turpentine, from two to three ounces; laudanum from one to two ounces—and after mixing, administer the whole at a dose.

ACKNOWLEDGMENTS.—Thanks to "O. K.," Rochester, for his valuable articles and good will.

We would say to those who read the articles over the signature "O. K.," that he is a practical farmer, and only writes of things upon which he is informed, unless it be in the form of inquiry.

For the New England Farmer.

IS THERE ANY SUBSTITUTE FOR THE PLOW?

FRIEND BROWN:—I find the following paragraph in the *American Agriculturist*, (a valuable paper, by the by.)

"Since the benefits of deep tillage and thorough pulverization of the soil have been recognized, it has become apparent that some new implement is needed in place of the plow. With the latter it is impracticable to reach the required depth without great expenditure of animal power, and the work of pulverization is imperfectly performed. . . . An implement is needed, to work by horse or ox power, that shall at one operation invert the surface growth, stir the soil deeply, and not make the subsoil still more dense. The invention of a successful apparatus of this kind will bring a large fortune to somebody."

Yes, I believe the fortune is a sure thing to whosoever will bring out an apparatus of this kind. But is it within the reach of possibility, is the question with me. That it is a felt necessity, none will gainsay. All admit, to greater or less extent, the evils alleged against the plow as now constructed, but all the suggestions made to obviate them, by substituting other methods, except spading and trenching, seem utterly impracticable for general use, while spading and trenching are so very expensive, that they can be adopted only to a very limited extent. A plow with pulverizing apparatus attached, was described recently, before the "American Institute Farmers' Club," which was commended by some, and regarded as utterly worthless by others. It roots up the soil and digs it to pieces, leaving much of the sod upon the surface, exposed to waste, and in a wet time to grow and be troublesome to extirpate. Let us look at some of the evils alleged against the plow. I may not enumerate them all, but some of the most prominent. The first and foremost is the pressure of the sole of the plow upon the bottom of the furrows; another, the treading of the team in the same, and the lifting of the furrow slice in order to turn it over properly, and again, the great amount of power requisite to draw the plow.

According to some, each time the plow passes over a field, it increases the compactness of the subsoil, and diminishes the chances for a good crop. *This position I am not willing to admit. If the sod is brought upon the surface, I care not how many times my fields are plowed previous to being planted with almost all farm crops. I do not believe the pressure of the plow, or the foot of the team, in the bottom of the furrow, so great an evil, as not to be very much counterbalanced by the increased advantage of the more perfect disintegration and mixture of the soil by repeated plowing.

As to the objection urged, that the weight of the furrow upon the mould board adds very much to the draught, I do not think much of it, for the reason that I suppose it not so great as generally thought, upon a well constructed plow. I think

we are not to believe the pressure of the furrow-slice upon the plow, anything like the *weight* of the same upon the scale. I think, according as the team moves slow fast or, the weight is increased or diminished. The fast team gives the sod or soil a momentum that greatly relieves the plow of its dead weight. The objection urged against the plow, that it requires great power of draught, I look upon as groundless, considering the work it performs. The simple fact, that every and all substitutes I have ever heard or seen described, require far more power to operate them than the plow, and at the same time not doing the required work enough better to supersede it, is conclusive evidence that for the quality of its work and power necessary to do it, it has not, and probably will not have very soon, a successful competitor.

That some substitute will eventually be found for the plow, is within the range of possibility, but I doubt whether, with the same amount of power, it will accomplish better results. If we wish to do more than our plows now accomplish, I think it must be at the expense of greater power. The plow will undoubtedly undergo improvements in the future, probably in not so great a ratio, but quite obvious. We have in our improved subsoil plows a remedy for the packing of the bottom of the furrow by the plow and team. On some soils, it is as really necessary to be used as the plow. Suppose we take the double, or Michigan plow, and follow it with a subsoil plow, what better is it possible to do, unless we resort to the spade, or trenching?

It is far from my intention to discourage the invention of superior implements to those we now have, but let us not overlook their merits in some wild goose chase after a substitute. O. K.

Rochester, Mass., 1861.

SINGULAR FACTS IN HUMAN LIFE.—The average length of human life is about 28 years. One-quarter die previous to the age of 7; one-half before reaching 17. Only one of every 1000 persons reaches 100 years. Only six of every 100 reaches the age of 65, and not more than one in 500 lives to 80 years of age. Of the whole population on the globe, it is estimated that 90,000 die every day; about 3700 every hour, and sixty every minute, or one every second. These losses are more than counterbalanced by the number of births. The married are longer lived than the single. The average duration of life in all civilized countries is greater now than in any anterior period. Macaulay, the distinguished historian, states that in the year 1685—not an unhealthy year—the deaths in England were as one to 20, but in 1850 one to 40. Dupni, a well known French writer, states that the average duration of life in France from 1776 to 1843 increased 52 days annually. The rate of mortality in 1781 was one in 29, but in 1850 one in 40. The rich men live on an average 42 years, but the poor only 30 years. —*Free Nation.*

WORDS are nice things, but they strike hard. We wield them so easily that we are apt to forget their hidden power. Fitly spoken, they fall like the sunshine, the dew, and the summer rain—but when unfitly, like the frost, the hail, and the desolating tempest.

For the New England Farmer.

CHARACTER IS CAPITAL---LET US PLAY THE MAN.

"Are you acquainted with the H—— brothers?" asked an old provision dealer of me, in Boston, awhile since.

"Very well so," answered I; "their farm is located within a couple of miles of my place, and I often call there."

"Well, what sort of men are they?" said he.

"Two hard working, thrifty farmers, and honest, reliable men."

"Well, that is just my experience," exclaimed the old man, with warmth; "and I have traded with them for many years; when I engage a lot of potatoes, or cabbages, or turnips, I don't have to worry myself about being here when they are delivered; I *know* I shall find everything all right. Then there is A., a neighbor of theirs; he's just like them; one of the honest and honorable men that I like to trade with; but it aint so with Z.; I have to look out for him; the measure is too short, or things don't come up to what's promised. I most always have some trouble with him."

So it is, in the long run, other things equal, the honest man is the successful man. When the market is but scantily supplied, the difference between the sharper and honest dealer may not be so distinctly drawn; but let the market be hard, the distinction is soon made evident. A smooth tongue may prove a power, when brought to bear on transient, floating customers; but that permanent patronage, which subtracts so much from the hardships of marketing, can be won by those only whose goods are as good as their promises. But were there no pecuniary motives to prompt to honest dealing, there would still remain a man's manhood to be respected—a precious heritage, worth more than was ever brought forth by the sweat of the brow—the immortal right to be maintained, though the pocket book may seem to suffer.

The practice of putting the best of the potatoes on the top of the barrel, ("deaconing," is the slang term for this), and the best of the load on the top of the wagon, is a curious illustration of cunning overreaching itself; the practice, if I am correctly informed, having now become universal, being required on the part of the purchaser, and consequently anticipated by the farmer.

But the genus sharper is common to both producer and dealer. There are men in the provision trade in the markets of Boston, men who do business on a large scale, too, who hold their promises very lightly if a dollar is to be made by the breaking of it. Many an honest farmer has been taught his lesson of the standard of manliness on the part of such, by some such experience as this:

"I have brought that load of onions for you."

"What onions?" exclaims the dealer, with well affected surprise.

"The onions that Mr. B., of your firm, spoke for yesterday."

"Mr. B. had no business to speak for the onions," replies the dealer; "we don't want them."

After a little sharp experience of this kind, our farmer perceives that whenever the article has fallen in the market, between the time it was ordered and the time appointed for delivery, Mr. A. will be very apt to declare, with well assured passion,

that Mr. B. had no right to order the article; it was not wanted; or vice versa, Mr. B. will in like manner declare that Mr. A. had no right to order the article; it was not wanted. It is better to keep our manhood, though there be but fourpence in the wallet, than store tens of thousands in the vault, by such rascality.

There are noble farmers I wot of, who have laid down and observed a rule for themselves in relation to such sharpeners, that I would that all might follow, to the end that the genus might be extinguished; viz., never after to deal with such, no matter what inducements they might hold out. They might thus be taught that *character* is capital.

The practice by some of bringing out barrels of extraordinary capacity to receive onions, potatoes, or other products purchased by the barrel, I need not say is a mean, unmanly act. I honestly advise men who intend going through life on such a basis of action to hang or drown themselves, or in some way stop the record just where it is.

The effect of such dealing on the relation between producer and dealer is most unfortunate. It produces a want of healthy respect and a mutual distrust, to the disadvantage of each party concerned. In the long run, neither party gain by it, pecuniarily, and I doubt not retire from business pretty well satisfied, that after all, such dealing is no proof of any great amount of either sharpness or shrewdness.

JAMES J. H. GREGORY.

Marblehead, Mass., 1861.

For the New England Farmer.

THE WHOLE THING IN A NUT-SHELL.

MR. EDITOR:—In your comments—in a notice of the Transactions of the Massachusetts Society for the Promotion of Agriculture—in the *New England Farmer* of Nov. 24, you "hit the nail on the head," and state the question just as it is—whether farming is profitable or not, and to my mind, the statement carries its own answer. It is *not*, whether this or that one makes money at the business of farming; but how is it on the whole, in the aggregate, as a class, comparing them with the same number in any other profession you please. If, as a class, the farmer does not enjoy better health—no small item in making up the balance sheet of human enjoyment—have more, or as many of the substantial comforts of life, works no harder, comparing muscle with mind, and its results as to wear and tear of the body, and, above all, is the most independent being which treads the ground he tills, or that walks on God's earth; and, lastly, if, as a class, they do not probate as much property as any other, then, I confess, farming does not pay, and men do well in seeking other employments, to secure happiness and property.

No man with any observation can justly question the above; they are the farmers *de facto*, whatever may be said to the contrary. Look at the "out of debt" farmer during the year 1861, thus far, and compare him with the other classes of the community. See how he stands out "head and shoulders", like an oasis in a burning desert, ahead and above all others in financial solidity. Surely he is the salt of the earth; his business the basis of all wealth and prosperity, as well as hu-

man enjoyment. This is no fiction, but eternal truth. The true farmer is like pure old brass, the more you rub him, the brighter he shines. The fruits of his business, like the bright, morning sun, cheers and comforts all. His, indeed, is a noble calling, fit for him who was made in the image of God.

Young man, don't be in haste to leave the old farm, with its cares and labors, to the "old folks," until you are well convinced, the world has something more noble and glorious for you. Rest assured, if you do, that in the sad hours which will come over you, its inmates and shadows will haunt you, while the aged folks at home will sigh and lament that no son is near to cheer them on, as the years come over them, and to lighten the labors of the good old farm. Young man, stay at home with the "old folks," and the farm is yours.

King Oak Hill, 1861.

N. Q. T.

DO YOU BRUISE YOUR OATS YET?

The London Omnibus Company have lately made a report on feeding horses, which discloses some interesting information not only to farmers, but to every owner of a horse. As a great number of horses are now used in the army for cavalry, artillery and draught purposes, the facts stated are of great value at the present time. The London Company uses no less than 6000 horses. 3000 of this number had for their feed bruised oats and hay. The allowance accorded to the first, was bruised oats, 16 lbs.; cut hay, 7½ lbs.; cut straw, 2½ lbs. The allowance accorded to the second, unbruised oats, 19 lbs.; uncut hay, 13 lbs. The bruised oats, cut hay and cut straw amounted to 26 lbs.; and the unbruised oats, &c., to 32 lbs. The horse which had bruised oats, with cut hay and straw, and consumed 26 lbs. per day, could do the same work as well, and was kept in as good condition as the horse which received 32 lbs. per day. Here was a saving of 6 lbs. per day on the feeding of each horse receiving bruised oats, cut hay and cut straw. The advantage of bruised oats and cut hay over unbruised oats and uncut hay is estimated at 2½d. per day on each horse, amounting to upwards of £60 per day for the company's 6000 horses. It is by no means an unimportant result with which this experiment has supplied us. To the farmer who expends a large sum in the support of horse-power, there are two points this experiment clearly establishes, which, in practice, must be profitable—first, the saving of food to the amount of 6 lbs. per day; and, second, no loss of horse-power arising from that saving.

THE CROP OF MAPLE SUGAR.—Hunt's *Merchant's Magazine* estimates the crop of maple sugar for the current year at 28,000 tons. The trees are tapped in February to obtain the product, and the process is usually completed by the end of March. An intelligent judgment may, therefore, be fairly formed at this date of the aggregate yield by the aid of careful comparison with the ascertained products of former years, and accurate observers generally concur in the opinion that the foregoing is a moderate estimate, viz.: 28,000 tons, or 62,720,000 pounds. Maple sugar may be fairly quoted at eight cents per pound. The aggregate of this current crop is hence \$5,017,600.

EXTRACTS AND REPLIES.

POULTRY.

Please publish the enclosed statement as the result of my experience in keeping fowls, for one year, commencing Nov. 15th, 1860, and ending Nov. 15th, 1861.

I commenced Nov. 15, 1860, with 35 fowls, valued at.....	\$17,50
Cost of grain and other feed.....	67,73
	\$85,23
Have sold 127 chicken for.....	57,30
“ “ 12 fowls for.....	5,75
“ “ 446 11-12 dozen eggs, for.....	97,51
	\$160,56
Have 84 fowls on hand, at 50c.....	42,00
	\$202,56
Deduct the cost.....	85,23
Nett profit for one year.....	\$117,33
Number of dozen of eggs laid in one year.....	4431
Number of chickens hatched.....	191
“ “ lost.....	3
“ “ raised.....	183

WILLIAM ROBINSON.

Watertown, Nov. 15, 1861.

SICK HENS.

Your correspondent from Marblehead says he has several sick hens, and asks, "What is the name of it? Is it contagious? What is the remedy?" In answer to number one, I would say it is what is called in the books on fowls, the roup. Second, Is it contagious? Yes, it would affect a thousand fowls, if he had as many. What is the remedy for it? Charcoal. Remove the sick ones from the other fowls as soon as they show any symptoms of hard breathing, the first indication of the disease, and feed with a little finely powdered charcoal mixed with Indian meal; give plenty of fresh water, and keep the fowls warm; white-wash your coop, and spread around in it chloride of lime. If his fowls are badly diseased, it is cheaper for him to cut their heads off, and begin with a fresh lot. That has been my experience.

C. E.

Malden, Nov., 1861.

TRANSACTIONS OF THE ESSEX COUNTY AGRICULTURAL SOCIETY.

I learn that 120 pages of this annual are already printed, and that the Essays and Reports which have been approved, will probably make 40 or 50 pages more. I have long been of the opinion that this Society has done more to advance the cause for which it is organized, by its annual publication, than in any other manner. I have these publications bound in decades, from 1818 onwards, and value them as highly as any book in my library. Like the farmer in his frock and trowsers, they give instruction in the natural way. The impulse given to this Society by Timothy Pickering and Henry Colman, will long be remembered, as among their most creditable labors. They were men of original thought and determined action—none of your *kid-glove* gentry.

P.

November, 1861.

COVERING FOR HAY STACKS, ETC.

The "Rubber Clothing Company," No. 37 Milk Street, Boston, make a tarpaulin, or stout drill, coated with rubber. This will keep stacks of hay,

oats, or any other grain, perfectly dry for any length of time. The tarpaulin will last for ten years, with ordinary care. They cost \$1 per square yard, and are made of any size.

HOW TO FEED A COLT.

A reader of the *Farmer* wants to know how to grow a two-years old colt to its utmost size. I have a three-years old colt, of the Black Hawk breed, that weighed at 37 months old 1025 pounds. He is said by good judges to be a good model of the original Black Hawk, formerly owned by David Hill, of Bridport, Vt., both in form and action, except the colt is about 75 pounds the largest. The feed I gave him last winter was as follows:—all the hay he would eat, (which was of the best Timothy and red clover,) four quarts of boiled potatoes, together with from one to two quarts of oat meal per day, and all the salt he would eat. I keep him in a box stall, without a floor. His color is a perfect black, except one white foot and a white spot in the forehead; is well broke to harness, is perfectly kind, and it would do any man, woman or child good to get into the sleigh or buggy and ride after him one mile, for it would give their blood a good circulation.

A. B. COLLINS.

West Dover, Vt., Nov., 1861.

FINE HORSES.

I have a Bullrush Morgan mare, one year and five months old, that weighs 923 pounds. I think this is hard to beat. I have also a horse colt of the same age, that weighs 773 pounds, sired by the Green Mountain Morgan. If any one can beat these, I would like to see the figures. These colts have not had any extra care, except they were kept in a warm stall last winter.

S. D.

Bolton, Jonesville P. O., Vermont.

PREPARATION OF BONES FOR USE.

EDS. COUNTRY GENTLEMAN:—In your paper of Nov. 14, you ask for a practical and inexpensive method of preparing bones for use. I will give you my way, which is so simple that, although I have practiced it for years, I should not have thought of parading it in your columns, but for your inquiry, and also because our friend HOWARD, of the *Cultivator*, who notices and remembers everything practical and useful, commended it in his last week's paper. I set an old cask, with one head, in some convenient spot back of the house, in the spring, and of the bones which have accumulated through the winter, I throw in enough to cover the bottom; then enough of unleached ashes thoroughly to cover them; then another layer of bones, then ashes, and so in alternate layers until the cask is full. On top is placed a sufficient covering of ashes, loam or charcoal dust, to prevent the escape of any gas. I usually wet down the ashes as I proceed, and leave the cask exposed to the weather, that they may be kept damp. By the next spring, when I wish to use them, the bones are thoroughly digested, and in a fit condition to use.

By this management I preserve all the material of the bones, and it stands to reason that they must be more valuable than those from which the animal matter has been extricated by the soap

boilers, and which are then burnt for the sugar refineries, and then made into superphosphate.

I usually take the mixed bones and ashes, and compost with well rotted manure, a liberal sprinkling of plaster, a little guano and salt, and a load of sweepings from the blacksmith shop, of iron scales, charcoal dust, horse hoof parings and the manure made there. This I apply to trees, especially pears.

The growth caused by this is astonishing; as you perceive, this compost contains all the requirements, both for growth and fruit, better than any purchased superphosphate, for it has the potash so essential to the pear, and the iron, which is very important. I also prepared my grape border with this.

I not only use the bones saved from our own family, but buy a good many, paying Irish and German boys for collecting, about half a cent per pound, which is the market price obtained by the cutlery works for their refuse bones.

I have great faith in the efficacy of both ashes and bones, and I think this combination of them is both cheap and useful.—JAMES S. GRENNELL, in *Country Gentleman*.

UNDERDRAINING.

We have received from Messrs. C. M. Saxton, Barker & Co., 25 Park Row, New York city, a highly valuable work entitled "Farm Drainage," by Henry F. French, Esq., of Exeter, N. H. We rejoice to have this opportunity of calling the attention of agriculturists in this vicinity to this important book—satisfied that no farmer can carefully read its clearly written pages without obtaining the choicest rules upon this important subject. We illustrate: Three years since an intelligent young farmer in Huntington, Ct., who had been carefully and thoughtfully examining this subject, purchased for a song six acres of "worthless swamp" in that town. There grew upon it occasional blades, thinly distributed, of wide, coarse, swamp grass; a few bunches of willow and alder bushes a foot or two high, struggling in the midst of the foul and stagnant water for an existence; the long water moss, skeleton-like in its proportions, a fitting emblem of death, and hosts of revelling bull-frogs. Thus had this unsightly swamp been, back beyond the memory of man, and thus did it remain up to the time we narrate. Well, the swamp was purchased at a song—the practical old farmers in the vicinity laughed and sneered at the fanaticism of this young enthusiast, but he persevered, surveyed and underdrained the six acres at an expense of \$150. The water left his land, so did the swamp grass and moss, ditto hoarse-voiced frogs, and the bushes he pulled up by the roots. He then sowed grass seed over the entire solid surface, and the past summer sold the six acres for \$117 per acre, and the crop now averages three tons per acre. This is only one case out of thousands where underdraining has been wonderfully successful and increased the value of the land more than five hundred per cent. We assure one and all of our readers who are interested in the soil, that \$1,00 cannot be appropriated to a better use than by the purchase of this excellent book on drainage, and we tender our thanks to the gentlemanly publishers for the opportunity they have given us to examine its pages.—*Newark Evening Journal*.

AN HOUR IN A PEAR ORCHARD.



E recently had had the pleasure of visiting the Pear orchard of W. BACON, Esq., of Roxbury, and of fully realizing some of the marvelous stories we have heard, of pear raising, in relation to both trees

and fruit. Mr. Bacon was accustomed to the farm in his youth, and cultivated there his natural taste for rural pursuits. He has "an eye for trees," as others have for paintings, or fine animals, or beautiful landscapes, and knows their names and peculiar habits, as a parent does those of his children. But that "Divinity that shapes our ends," called him away from the profession which he loved, and placed him in a dry goods store, where *forty* years of devotion could not obliterate his early tastes. Galloons and laces, muslins, and Thibets, and collars might bring profits to his till, but never could satisfy his desire for the swelling buds, fragrant blossoms and graceful branches of favorite trees. So at the end of more than sixty years, he snatched an hour now and then from the counter, raised a piece of land a yard wide, from the salt marsh, dressed it, planted his trees, fashioned their limbs to gratify his critical eye, and now, one among them stands the handsomest Dix pear we ever saw! Six or eight other trees comprised his first effort. They were planted directly behind his store, which stands on the main street in the city of Roxbury, and were placed upon a sort of terrace which he threw up from the marsh, and which answered the double purpose of a dike to keep out the returning tides, as well as a bed for the roots of his favorite trees. These eight or nine trees are now each about eight inches through, and pay the interest of more money than we dare state in this notice.

At length the old love got the mastery; the store and all its interests were abandoned to his sons, and he went forth into the cheerful light to indulge his early tastes, and grow young again. He now entered upon his plans with avidity, by making ditches through the marsh, and diking out the salt water that returned with the flood tides. Where paths were to be made, the earth was thrown out to the depth of three feet and its place supplied with oyster shells. Over this earth was thrown street sweepings, old mortar, ashes, and all similar rubbish that he could obtain. To this was added large quantities of *tan bark*, and to this,

mainly, he imputes the wonderful success he has had in producing his almost unrivalled crops of pears! Not that the trees find in this the principal aliment they require, but that it forms a soft, moist and porous root bed, where the roots can range without obstruction in search of other and richer substances which he applies to the soil. The land is so thoroughly drained, and so open and light, that a fortnight's rain, he says, makes no difference in its appearance.

The piece of land we went over is something less, we should think, than one acre. On this he has *six hundred* standard pear trees; that is, trees set in place and not to be removed, though most of them are on quince stocks,—beside large numbers of young trees which are for sale, and plum and peach trees, currants, gooseberries, raspberries, flowers and ornamental shrubs. Between these he manages to raise his potatoes and such other garden stuff as he needs for his table.

Passing a tree, Mr. B. remarked that it produced four bushels of pears this season, which he sold for *forty-eight* dollars! Another near it a little less, and a *Beurre Diel*, three years ago, gave him the neat sum of *eighty-two* dollars for a single crop!

The ground upon which all his trees stand, is made ground—redeemed from the salt marsh, first by digging ample ditches, and using the material as far as it would go for filling up, and following with loam, leaves, street sweepings, weeds, old mortar, decaying chips, and almost all sorts of rubbish which he could obtain, but, chiefly—he emphasised—*tan bark*, which he had applied on this small space at the rate of twenty-five cords per year! He dwelt upon this part of his process with unusual earnestness and gratification.

Passing along, we thought if the ditches could talk, they would tell a favorable story. It seemed to us that they partook in some measure of the nature of common sewers, and collected at the hands of the proprietor an abundance of the richest materials both for trees and their crops. Be this as it may, Mr. Bacon has achieved a success nearer perfection than any thing else in that direction which we have ever witnessed. That success has been gained, mainly, by three things, viz:

1. *Thorough Drainage.*

That the drainage in this case is perfect, is evident from the fact stated by Mr. B., that a fortnight's rain makes no perceptible difference in the appearance of the land. Those who understand the philosophical principles involved in such drainage, will readily comprehend the advantages gained beside that of the passage of rain water through the soil.

2. *The Depth and Richness of the soil.*

The depth of soil under these trees is not anywhere less than *two feet*, and probably varies from that to *three feet*, and from the surface to bottom, it

is thoroughly mixed with the rich substances which have already been named. This is kept light and porous by frequent digging, so that nothing can be more convenient or inviting to roots of any sort of energy to run and feed in, than the bed which is prepared for them.

3. The third material point is that of *Shelter*. The importance of this is not yet fairly appreciated by our gardeners, even, and by the farmer is scarcely thought of in connection with his fields. Mr. Bacon's orchard is surrounded by buildings, only separated from it by passage-ways perhaps twenty feet wide, and by a fence next to the trees some eight feet high. On the south corner of the lot stands one of the largest trees in the number, and he remarked that he "should head that down, because the wind had too much power upon it."

It may be objected by the reader, that we cannot imitate this example in all of these points. We should not, however, plant pear trees where we cannot avail ourselves of the first, *drainage*—and the true policy is, not to set any more trees than we have the means of providing with a root-bed something like his, and then it will not be expensive to plant evergreens or put up fences for shelter.

Those of us who have already planted pear trees may find many valuable hints from Mr. Bacon's practice. If we cannot reach his excellence, let us, at least, attempt to *imitate* it, by occupying the entire ground with trees, say six or eight feet apart, and keeping them enriched and cultivated in the best manner, *as far as we go*. This course pursued with a dozen trees, will give us more profit than will three times the number managed upon the common plan.

We saw nothing in the practice of our friend, in regard to setting or shaping the trees, that required comment. The trees themselves were as clean and bright as the morning face of a pretty baby. The limbs and spurs were remarkably stout, and of a light gray color.

In reply to the question, "when should pears be gathered?" he said a "little time before they are ripe." When gathered, he places them on shelves in single tiers, in cellars. They are well ventilated, and a little moist, and so arranged that he has considerable control over the temperature. Many of his pears he sells himself, at prices ranging from \$1 50 to \$4 per dozen.

SIMPLE METHOD OF STRIKING ROSE CUTTINGS.—"Rusticus" describes his plan of striking roses in a late number of the *Gardeners' Chronicle*, as follows:

"I have been in the habit, for some years, of striking roses in what appears to me a much more simple way than is described in your paper of the 5th inst. At any time of the year, when they are

to be procured, I take cuttings of any sorts of roses I want to propagate, (Moss included,) and cut the half-ripened wood into lengths of two eyes. I remove the bottom leaf, leaving the top one to rest upon the surface of the bed and nourish the cutting while it forms its roots. The hot-bed (a very slight one) in which I plant the cuttings, is made thus: On the top of a little manure, just enough to give a slight bottom heat, I place 6 inches of earth, moistened to the consistency of mortar, then cover with white sand, and set in the cuttings. I have occasionally struck every cutting, while 99 out of 100 are an average result."

For the New England Farmer.

VALUE OF MEADOW MUCK.

MR. EDITOR:—Much useful information has been received from time to time through the columns of the *Farmer*, in relation to the valuable properties of muck, and many farmers have, doubtless, been stimulated thereby to use it more freely than formerly. An article in your issue of the 16th, from the *Southern Homestead*, in which the writer, among other things, expressed his belief that not one farmer in twenty fully appreciates its value, induces me to state the method I have sometimes taken to use a considerable quantity of it on our own place.

The past season has been unusually favorable for the clearing out of old ditches and opening new ones, and having quite a surplus on hand, after filling my yards and barn cellar, I am now drawing at the rate of twelve to fifteen ox cart loads per acre to all my high ground, (ten or twelve acres,) that I intend to plow next spring, spreading as fast as I draw it. To plow this in at once, in its green state, I have no doubt would prove rather injurious than otherwise to the soil; but spread out thinly, exposing it to the freezing and thawing process from Nov. to April, it becomes completely pulverized and slackened, and so rendered fit for use. I do not, of course, depend on this alone for a crop, but use the same amount of animal and compost manure that I otherwise should. I tried the same method a few years since with five or six acres of orcharding, and still later, with another piece of high gravelly soil, in both cases, I think, with favorable results. It is no doubt possible to use too much of this valuable material. To repeat this dose every year, or even once in five years, would not perhaps be advisable, but thoroughly slackened by frosts, or mixed in suitable proportions with animal manure, ashes, seaweed, &c., I apprehend few farmers use it to excess.

I derive so much pleasure from seeing things grow, and helping them to grow, that I frequently purchase small quantities of plaster, ashes, guano, or phosphate, to stimulate a certain crop that needs a little more food than I can otherwise give it, but with the exception, perhaps, of ashes, I think I have never realized more than dollar for dollar on the sum expended in such fertilizers; but decomposed material gathered up from our own place costs comparatively little, and yields in my estimation four fold. It is very important to make all the manure we can in our yards, barn cellars, &c., but I apprehend some farmers waste labor by drawing more muck into their yards than can be saturated or mixed to advantage. Labor is so im-

portant a consideration on a farm, that we cannot afford to haul material out of our yards, in the same state in which we haul it in. I think those who have a supply of muck on hand, and high lands requiring its use, will do well to use a part of it in the manner I have practiced.

JOHN F. FRENCH.

North Hampton, N. H., Nov., 1861.

REMARKS.—We are always gratified on finding our friends properly appreciating the value of meadow or swamp muck. It is capable, we have no doubt, when properly used, of doubling the productive power of many of our New England farms. Standing by the side of a grass field of twenty acres some time since, with a friend, he inquired if we could observe a difference in the crop on any portion of the field? We replied in the affirmative, and readily pointed out that portion where the grass was thicker and more luxuriant than on any other part of the lot. "Well," said he, "*thirty years ago*, that strip where the grass is so much better, was heavily dressed with meadow muck, and with that exception has always been treated just like the rest of the field!" The land is a sandy loam, and all lies on nearly the same level. The strip dressed with muck had annually given a better crop than the rest of the field.

For the New England Farmer.

SHINGLING.

Can I aid the readers of the *Farmer* by a word or two about shingling? Every farmer is put to great expense for roofing. It is quite obvious that some of the expense is needless.

In the first place, a roof should have a good pitch. Many roofs in our country are too flat; the wet don't drain off readily. The English people build with high peaked roofs; more necessary with them, on account of their damp climate. A flat roof, if tight at first, will last but a short time; water will find its way under the shingles and not dry out, and decay will at once commence.

The kind of Shingles.—I don't believe much is saved by using cheap shingles. The labor is more in laying them. They last from seven to fifteen years. A good shaved pine or cedar shingle will last forty years. A shingle should wear out, not rot out. How often it is seen that roofs with rows of shingles of full size and thickness, are one mass of spongy rot.

The result of my experience is, that shaved shingles are preferable to sawed. Water has a tendency to follow the grain of the wood, and oftentimes a sawed shingle will soak through. The principal reason why a shaved shingle lasts so long is, that it does not hug down so tight to the roof as the sawed one, and soon dries after rain. Carpenters are often careless about the breaking of joints. If the shingle has but a small lap, in a few years it will have worn off the edge, and have shrunk so as to let in wet.

I have been amused at some new methods of shingling recommended in the *Farmer*. One was, to shingle right over the old roof, without disturbing it! A man who would do that would make

his toilet by putting on his clean shirt over the soiled one.

Somebody has a preparation to swab on which will make any roof water-proof. The few who have tried in this vicinity, for a short time, the brown paper and highly fragrant coal tar, for protection from the weather, have gone back to shingles again—sadder, wiser and drier men.

WM. D. BROWN.

Concord, Mass., Nov., 1861.

GLANDERS.

Although this disease has been pronounced incurable by Mr. Bauley, of Alfort, some cases are reported in the *Gazette des Hopitaux*, in which the attempts at a cure proved successful. In April, 1859, writes Dr. Joufflet, of Montrouge, I bought a thorough bred mare, seven years old, and apparently sound. One month later; pustules in the legs ulcerating; sub-cutaneous abscess, glands, oedema of the limbs. Mr. Reynal, of Alfort, diagnosed chronic glanders requiring slaughtering. No running at the nose; nothing there, nor in the pharynx or the mouth. I could not consent to such a sacrifice, but instituted this treatment: 75 grains of sulphur twice a day, common salt, iodine, good diet. The sub-cutaneous abscess opened of itself; a degenerated ganglion formed an enormous vegetation. I removed it, and to combat suppuration, I administered the fresh leaves of aconite. The animal was losing flesh. I continued this treatment for four months, aided by good diet: barley, wheat, oats; and to-day my mare looks so well that I am beset by amateurs, who want to buy her.

One of my friends had a horse in the same condition, and was going to have it slaughtered, as it did not eat. It was placed under the same treatment: injections, tincture of iodine, sulphur at meals. After a few days, the appetite returned, and with it the strength, etc.

Two farmers, father and son, contracted the glanders from five horses affected with it. The father fell rapidly as a victim of the disease. The son, whose disease assumed the chronic form, was placed by Dr. Lesur under a mercurial treatment; calomel internally and cauterization of the pustules with the acid nitrate of mercury. One month after, the cure was complete.—*American Medical Times*.

A NEW FENCE.

MR. CHARLES R. SMITH, of Haverhill, N. H., recently put up on our farm a few panels of a fence which he has invented, and which is well worth the attention of all our farmers who are obliged to resort to materials of wood for their fences. It is so constructed as not to come in contact with the ground at all, but rests upon common stones, such as may be found in most stone walls between fields. It seems to us to be an economical and durable fence, and that one well put up and kept whitewashed, would last at least fifty years. We are not able to give the cost per rod, but intend to learn what that will be, the coming spring.

For the New England Farmer.

CONTRASTS IN FARMING.

MR. EDITOR:—A trip over what used to be the main thoroughfare for travel between Northern Vermont and New Hampshire to Boston, in the latter part of October, enabled me to see something of the farmers and their farms; and, as I have nothing better to do just now, I will venture to write down a few observations about them.

Within a few years, the general appearance of the farms, in those sections of New Hampshire and Massachusetts through which I passed, has improved very much. Neatly painted houses, and substantial, well finished barns, have taken the places in many instances of those much less so; and unmistakably prove that farming is not always "a losing business." But, O, the fences!

In speaking of houses, why do not more of our farmers, who are about to build new ones, avail themselves of the modern improvements in house architecture? Neat, tasteful and convenient houses, like some of those designed for the *Farm-er*, can be built at about the same cost as the square, old-fashioned structures of a former age. There is still in this enlightened age, and in our own New England, a great prejudice against "book farming," and, in passing along, one need not greatly err in guessing where farmers of this stamp live. The out-of-door as well as in-door indications that they *don't* afford to take agricultural papers, are too apparent to be mistaken. Look at exhausted fields, and the scanty yield of grain and grass, and near by, immense deposits of muck untouched. Look at the rich swamp lands which only need thorough drainage to make them equal the prairies of the West. Look at the thousands of brooks and rivulets, whose babbling waters might be made to irrigate tens of thousands of acres, now parched and withered by every summer's sun, which, with a little knowledge and a little labor, might be made to yield ten-fold.

The scarcity of public houses upon the road made it necessary to make the acquaintance of one of this class of farmers, where we stopped to get oats for our horse. The great "barny" house was situated close to the road, and, after an unwelcome salutation from a great surly dog, and a "get out" from his surly master, we ventured within. Our "first impressions" of the dog and his master, and their home, were not very favorable. Although he treated us kindly, "get out" was written all over his hard, solid face. His history of "hard times, poor crops, hired man gone to the wars, sons to California," was in perfect keeping with the outdoor embellishments of broken carts, plows, &c., which lay scattered about. An almanac, an old account-book, and a newspaper of doubtful loyalty, were the only evidences of a library, or of reading, we could discern. Not a shrub, not a tree was visible to look upon, or break off the glare of the noon-day's sun from his cheerless home. A beautiful maple, spared by the woodman of another age, he had cut down because "the plaguy birds built their nests in its branches, and it prevented him from seeing the cows when they got into the corn." From youth to manhood and old age, here is no improvement, and no more hopes of any than in a Bedouin Arab. With another growl from the dog, and another "get out" from the master, (which our self-respect, and respect for human nature, makes

us think was intended for the dog, and not for us,) we bade him good-bye.

In striking contrast with this were the home and character of another farmer. The neat and tasteful cottage situated well back from the road, the beautiful lawn, the well-kept walks and driveways, the well-built and convenient barn, the flourishing orchard, the garden, with fruits and flowers, and the work-shop and library, were the outward tokens of an intelligent farmer. The single expression, "I cannot bear to be idle," explains it all. The stranger, visitors, friends and kindred find within neatness, order, elegance and refinement, with true politeness which springs only from a kind and genial spirit. The birds find in him a friend, and build their nests close up to his very door, and childhood, mute as to words, expresses its consciousness of being loved, in the outbursts of a joyous nature. Here is everything, thought I, to make life happy, but, ah, not everything. That priceless blessing, sound, robust health, has been denied him.

An educated, working farmer, with the moral and social qualities duly cultivated, is the noblest type of manhood. Such a man writes his history on everything about him, and its bright pages will be read long after he has passed away from the living. North or South, such men are never bigots nor traitors; and their example is much safer and worthier of imitation than his whose footsteps are followed by the tramp of armies.

Farmers, "take the papers." Read, study and experiment. "Let us improve the mind and the soil," and the world will be the better for our having lived in it. s.

Haverhill, N. H., Nov., 1861.

WHAT "ROUGHING IT" MEANS.

"Roughing it" has various meanings, and the phrase is oftentimes ludicrously mistaken by many individuals. A friend with whom we once travelled, thought he was roughing it daily for the space of three weeks, because he was obliged to lunch on cold chicken and uniced Champagne, and when it rained, he was forced to seek shelter inside very inelegant hotels on the road. To rough it, in the best sense of that term, is to lie down every night with the ground for a mattress, a bundle of fagots for a pillow, and the stars for a coverlet. To sleep in a tent is semi-luxury, and tainted with too much effeminacy to suit the ardor of a first-rate "Rough." Parkyns, Taylor, Cumming, Fremont and Kane have told us how much superior are two trunks of trees, rolled together for a bed, under the open sky, to that soft, heating apparatus, called a bed, in the best chamber. Every man to his taste—of course, but there come occasions in life when a man must look about him and arrange for himself, somehow. The traveller who has never slept in the woods, has missed an enjoyable sensation. A clump of trees makes a fine, leafy post-bedstead, and to awake in the morning amid a grove of sheltering, nodding oaks, is lung-inspiring. It was the good thought of a wanderer to say, "the forest is the poor man's jacket." Napoleon had a high opinion of the bivouac style of life, and on the score of health, gave it the preference over tent-sleeping. Free circulation is a great blessing, albeit we think its eulogy rather strongly

expressed by the Walden-Pondist, when he says, "I would rather sit on a pumpkin, and have it all to myself, than be crowded on a velvet cushion. I would rather ride on earth in an ox-cart, with a free circulation, than to go to heaven in the fancy car of an excursion train, and breathe a *malaria* all the way." The only objection to out-door slumber is dampness; but it is easy to protect one's self in wet weather from the unhealthy ground, by boughs or India rubber blankets.—*Atlantic Monthly*.

AGRICULTURAL ADDRESS.

We have before us an address delivered by LUTHER H. TUCKER, Esq., before the Oswego County Agricultural Society, New York, in September last. Mr. T. is one of the editors and proprietors of the *Country Gentleman* and *Cultivator*, published at Albany, two of the best agricultural papers which we see. The address is an excellent one, abounding in good thoughts, well expressed. Its leading heads are,—“Low prices necessitate better farming;” “Are we to anticipate the continuance of low prices?” “The course of our agriculture in the past;” “Is our farming of a paying or progressive kind?” “Money-making in any pursuit mainly dependent upon industry and skill.” Under this head he says:

In speaking of the profits and pleasures of farming, we must put it upon the same level as we should an occupation of any other kind. Suppose I address my neighbor, the tailor, or the shoemaker, and ask if tailoring or shoemaking pays, and is an agreeable way of life? Suppose I turn to the merchant or the lawyer, and inquire whether over the counter or before the court, there is money to be made and enjoyment to be won? In either of these, or in any similar case, it is easy to predict the answer, when you are questioning a man of industry, of a reasonable degree of economy, ability and skill, who has a taste for the pursuit in which he is engaged. Indeed, with success, there almost always comes a taste for that which is the source of success, if, as is not impossible, it may not have previously existed in a very prominent way. But go, on the other hand, to a shiftless mechanic, a careless, credit-less merchant, an indolent or blundering lawyer, and you will be sure to learn that either of these employments is an inevitably laborious and losing one, if not also intensely disgusting and disagreeable! It is the bad workman quarrelling with his tools. There are of course exceptions, here, as to other rules. But in farming, as in the other established occupations of mankind, we are nevertheless obliged to conclude that when it fails to be reasonably remunerative, the fault must be in the particular individual or circumstances, not in the class and pursuit to which they belong.

The subjects that follow are,—“The deterioration of our soil and crops unsupported in fact—Importance of agricultural statistics;” “The problem of maintaining the fertility of the soil;” “Animal life becoming in turn the support of vegetable life;” “The resources of any soil may be ex-

hausted, or, by good management, rendered practically illimitable;” “How nature may co-operate in maintaining and extending these resources;” “Good farming the surest and cheapest.” Under this head, Mr. T. says:

Good farming is the surest farming, as it is also the *cheapest farming*; for every additional bushel of grain or hundred weight of hay which is grown upon an acre lessens the cost per bushel or per cwt. of all the rest—the labor being in proportion to the *surface cultivated*, rather than to the crop produced. Said a young farmer to me the other day—“I only mow one-half the number of acres I did four or five years ago—having let a part of my grass land for pasturage; but, by greater economy of manures, my hay crop is now as large as it was before, and I keep just as much stock the year round.” There are probably similar instances within the knowledge of you all—affording ample illustration of the truth I have been endeavoring to enforce—that none of us have as yet fully tested the capabilities of our farms under a proper system of management. How many of us, for example, in the older settled parts of the country, have in truth better and as yet untouched farms, awaiting the plowshare and the plant-root, away down underneath the ones we have been so long and so *shallowly* cultivating on the top.

Some of the other topics discussed are,—“Bad farming at the present day less excusable than ever before;” “One well fed acre more profitable than three poor fed acres;” “Average crops as estimated sixty or seventy years ago,” and “A prosperous agriculture the foundation of all national prosperity.”

All these topics are discussed with a clearness which shows that the writer has given them much thought and research. The address is an excellent one, and cannot fail to help on the good work wherever it is generally read.

For the New England Farmer.

THANKSGIVING DAY.

This day is connected with events of importance, and is of great interest to the farmers who are more directly dependent upon the object of its observance than any other class of people. The New Englanders have observed it ever since its first appointment by the “English fathers,” as a day of thanksgiving; and now almost every other State in the Union have joined with them to celebrate its annual return.

Since the causes which impelled the Pilgrims to resort to prayer and thanksgiving, on this day, have added so much to the moral and religious character of the people of New England, a brief sketch of the events of the day may not be uninteresting to the readers of the *Farmer*.

It was in the year of 1621, that the colonists of New England gathered their first harvest; and, as soon as they had done this, they sent out four huntsmen for fowls, and when they returned, having been successful, the Pilgrims, “after a special manner,” rejoiced together, because they had been blessed with a bountiful harvest. That noble In-

dian chief, Massasoit, and ninety of his men were present on the occasion, and participated in the festivities. Thus the festival of "Thanksgiving" was instituted in New England, and those noble lords of the forest united with the Pilgrim fathers, in peace and harmony, on this memorable day.

In the second year after this festival, the day was rendered more solemn and impressive in consequence of an almost providential deliverance of the colonists from an impending famine.

"In 1623," says the historian, "fears were entertained for the safety of the colony, by reason of anticipated famine." For weeks and months the colonists suffered from a severe drought. Corn withered under the heat of the scorching sun. Every vegetable, shrub and tree, bore signs of anticipated famine. The Indians prophesied famine for the suffering colonists, for, by starvation, they thought they could easily conquer and subdue the "pale faces;" but those brave and faithful Pilgrims were not to be discouraged, nor dismayed. In this fearful extremity, a day of public fast was appointed, and was accordingly observed with "great solemnity." This was the first Fast Day ever kept in this country. The day opened with no better prospects of rain. Nine hours, these trusting Christians continued in prayer. At length, towards evening, clouds began to collect, and before morning, rain descended in refreshing showers, and thus it continued to rain for several days, until the crops revived, and the fields were clothed in their former verdure. A bountiful harvest succeeded. In token of general gratitude for this deliverance, a day of public thanksgiving was ordered, being the second such day ever observed on these Western shores.

This festival was originally confined in its observance to the State of Massachusetts. Now, almost every State in the Union, if not all, hail its return, and join in its celebration with gratitude and joy.

This day is productive of many pleasing reminiscences connected with our childhood, and with those whose familiar faces we have been accustomed to look upon, on this day, but who are now gone to their peaceful rest.

When we have met around the festive board to exchange greetings and smiles, and to enjoy the plentiful repast before us, we should not forget others whom misfortune has deprived of the real comforts and blessings of life; who are now struggling for the life-blood of our nation. Let us give our prayers for the restoration of peace, and be thankful that we have lived to participate in a festival in token of gratitude for a bountiful harvest.

A GREEN MOUNTAIN BOY.

West Charleston, Vt., Nov., 1861.

SIMPLE METHOD OF STRIKING ROSE CUTTINGS.—"Rusticus" describes his plan of striking roses in a late number of the *Gardeners' Chronicle*, as follows:

"I have been in the habit, for some years, of striking roses in what appears to me a much more simple way than is described in your paper of the 5th inst. At any time of the year, when they are to be procured, I take cuttings of any sorts of roses I want to propagate, (Moss included,) and cut the half-ripened wood into lengths of two eyes. I re-

move the bottom leaf, leaving the top one to rest upon the surface of the bed and nourish the cutting while it forms its roots. The hot-bed (a very slight one) in which I plant the cuttings, is made thus: On the top of a little manure, just enough to give a slight bottom heat, I place 6 inches of earth, moistened to the consistency of mortar, then cover with white sand, and set in the cuttings. I have occasionally struck every cutting, while 99 out of 100 are an average result."

For the New England Farmer.

CULTURE OF PEARS---VARIETIES.

The great variety of pears now cultivated by nurserymen, renders it rather a difficult matter for an amateur, with a small garden, to make satisfactory selections. Hardly two men can agree upon the best varieties. One man's soil develops a few kinds only to perfection, while another's brings up to a high state of excellence other kinds. Besides, men's tastes differ very much. One individual may possess an old tree which matures its fruit to perfection; while another is dissatisfied with the same fruit grown on younger trees. The Glout Morceau, on young standard trees, is almost worthless; but on matured trees, excellent. Some soils or positions bring up the Beurre Clairgeau to a high and beautiful color, while others leave it a russet hue. So also with the rich coloring of the Flemish Beauty. The Vicar of Winkfield, as a table pear, is harshly judged from its general product, whereas, only the finest and largest are fit to eat.

A good plan for an amateur is, to plant merely healthy *stocks*, for the most part—especially if he is making additions to his collection—as in a little time he will be better able to judge for himself what varieties do best with him or with his neighbors, and then graft the stocks accordingly. By this process he will get large trees equally as soon as by setting grafted varieties, and without so great a liability of disappointment.

If a person requires a few dwarf trees, it is well to purchase the Louise Bonne de Jersey, the Duchess d'Angouleme, the Urbaniste and Flemish Beauty, or others whose junction is strong and healthy, and then re-work upon them to his fancy—for all, or nearly all pears, do well double-worked upon the quince root.

To facilitate the striking of pear roots from dwarf trees, they should be set from two to four inches below the junction, even if many of the bottom roots are sacrificed; and at the same time of setting (if in the spring,) or better, in the following July, the bark should be raised in two or three places, with a sharp knife, on the lower edge of the pear stock. On the closely pruned quince roots fibres will readily appear, and the returning elaborated sap, or cambium, will be likely to make deposits at the slits, from which pear roots will proceed.

Many foreign winter varieties, hard to mature in our climate, should be planted in the warmer and dryer situations, but the earlier varieties will ripen in a heavier or damper soil.

Though many of the hundreds of pears under cultivation are faulty or worthless, still there are a dozen or twenty varieties which, by general consent, are well worthy of extensive propagation.

Among these may be mentioned the Rostiezer, Bartlett, Flemish Beauty, Belle Lucrative, Urbaniste, Duchess d'Angouleme, Glout Morceau, Lawrence, Beurre Diel, Beurre d'Anjou and Winter Nelis. The Beurre Clairgeau is very showy and saleable, and though not first-rate, improves by keeping. The Beurre Superfine I regard as more valuable, and is a variety very highly recommended by Mr. Field in his work on pear culture. It answers to all the good traits of a fine fruit, and is later than, and hence need not compete with, the Bartlett. The Seckel is an old sort, and has made its reputation; but as it is slow in coming into bearing, and requires a very high culture to produce fruit of decent size, other kinds are now regarded as more profitable. Though sweet and delicate—too sweet for many tastes—it lacks that sparkling, champagne flavor which now seems to be the criterion of superior excellence. And the same may be said of the Belle Lucrative, which is a dead sweet, and though popular, does not, as far as I have noticed, develop the great proportion of its fruit, as many other varieties do, and is inclined to drop it prematurely. The Beurre Bachelier—a late pear which grow enormously in France—is promising finely here, and from specimens which I have grown the past season on a standard tree, I regard it as an important acquisition.

Besides the above, which constitute a portion of the good pears, many native seedlings are claiming notice—among which prominently stand Mr. Dana's—and probably they deserve it.

West Medford, Dec., 1861.

D. W. L.

AGRICULTURAL DIVISION OF THE PATENT OFFICE.

We learn that during the first three-quarters of the present year members of Congress have been supplied for distribution to their constituents with about six hundred thousand papers, containing one hundred and fifty-four varieties of vegetable and two hundred and thirty varieties of flower seeds—many of them new and very choice, and others very old and excellent kinds, but not in general cultivation. Some ten thousand packages (each containing two quarts) of cereals were also distributed to the members. These comprised new and choice varieties of wheat, oats and barley from France, Germany, Italy and Turkey.

Upwards of eleven hundred Agricultural Societies, in every part of the country, also received their quota for distribution in their respective communities—to an amount of three hundred thousand papers of vegetables and flowers, and ten thousand packages (two quarts each) of cereals.

In addition to the above, it is estimated that upon personal or written application to the Agricultural Division twenty thousand of our countrymen and fair countrywomen have been supplied with five hundred thousand papers of vegetable, flower and field seeds during the three-quarters of the year referred to.

The fourth quarter of the year will unquestionably show an amount of labor and usefulness in full proportion to the above.—*National Intelligencer.*

THE man whose word can always be depended upon, is sure to be always honored.

For the New England Farmer.

SYNOPSIS OF THE SEASONS.

BY R. F. FULLER.

Enter SPRING.

My kind friends, good morrow! you know who I am;
And SPRING does not need to tell any her name.
The flowery dresses I constantly wear,
And train of attendants, my name all declare.
You wonder, perhaps, how a little young thing,
Like me, has dethroned old WINTER, the king?
I killed him by kindness—that's often been done;
By smiles and by sunshine his sceptre I won.
If you try my method, it often will prove
No force in the world is so potent as love!
Although you may think me a gay, laughing thing,
Just hear a good word of advice from the Spring!
Sow your seed in the evening, and sow it at morn!
For soon will the season of seed-time be gone!
Dear children! now plant seeds of knowledge and truth:
In manhood you'll reap as you sow in your youth!
Sow merry if may be; but sow, though in tears;
And joy shall be yours when the harvest appears! [Exit.]

Enter SUMMER.

My name is the SUMMER—longer days will I bring,
Than those, that have left you, I' the train of the Spring.
Spring bears many blossoms, that fade as she goes;
But I alone bring you the beautiful rose!
And insects I've many, of gorgeous wing,
Who could not endure the caprices of Spring.
A thousand gay flowers the Summer shall wear,
That breathe the balmy sweets on the sunshiny air!
Though some days are warmer than all of you suit,
Remember, they're needed for corn and for fruit.
My grotoos, how grateful—my even and morn!
—You 'll know how to miss me, when Summer is gone!
[Exit.]

Enter AUTUMN.

My name is the AUTUMN—I know I appear
More staid than my sister, so recently here.
And some do not like me—but such you will find,
Are those of a feeble or frivolous mind.
My falling leaf whispers a tale so forlorn—
“The harvest is ended, and summer is gone!
And life has its seasons”—it mournfully saith—
“Youth, manhood and age; and, after, is death!”
But those who, in springtime and summer, have wrought,
Find a harvest, in Autumn, of happiest thought.
Ere dropping, how gorgeous a robe are the leaves!
What a cause for thanksgiving the shock and the sheaves!
Though Winter is coming, and soon will be here;
They're ready, who've worked in the rest of the year!
[Exit.]

Enter WINTER.

How d'ye do? Methinks that your welcome is cold,
In greeting again an acquaintance so old!
I hope that you have not forgotten me, yet,
Though favors, I know, all are prone to forget!
Why, 'tis not, I'm certain, a year quite ago,
I spread you a carpet of new-fallen snow!
Then merrily jingled the bells of the sleigh,
When lads rode with lasses, and laughed all the way.
How often I've heard you declare, every one,
There's never a season like winter, for fun!
And those, in my evenings the long taper burn,
All say, that in winter 's the season to learn.
And, then, too, very often, when some will complain,
And sigh for the beauties of summer again,
I've hung my bright jewels of ice on the tree,
And all have admitted, none dazzle like me.
—Now, listen, my children! as older you grow,
You'll find there's great use in the ice and the snow.
Nor, could you enjoy thus the SUMMER and SPRING,
Except for the reign of old WINTER, the King!
[Exit.]

For the New England Farmer.

SALT FOR ANIMALS.

MR. EDITOR:—It is thought by some, that salt, instead of being beneficial, is so injurious to animals as to do them more harm than good, so that they had better be without it than with it. More than a year ago I heard a farmer in this town declaim very earnestly against the use of salt. He spoke very eloquently and decidedly upon the subject, and pointed out several instances in which he had known salt to be injurious to animals. I can not remember all the particular instances he gave; but they were something like the following:—One farmer had lost a fat cow by letting her eat as much salt as she pleased. Another farmer, from the same cause, had lost the use of a fine yoke of three-year old steers which had been so injured as to be unable to do any work for three months. Another farmer, from the same cause, had lost a large flock of sheep, which had become so rotten and diseased that several died daily.

Now, this all sounded very well, though it was somewhat alarming to some of those present. It was uttered very smoothly and gracefully, and with great apparent sincerity. It was rolled from the tongue in a very flippant and tripping manner which seemed to challenge the possibility of a doubt; and yet, it is now, as it was then, very evident, that the whole truth was not told; because it was not so much the *salt*, as the *quantity* of salt that did the mischief. It is not true, that salt generally injures animals. It is only when eaten in *exorbitant quantities*, that salt has an injurious effect. It is highly probable, that the same animals would have been equally injured, if they had been fed upon any kind of grain, and allowed to eat all they would, after they had been for a long time without it. The truth probably is, that the animals had not been salted for several weeks, so that, when they had access to salt, they ate so much as to injure them. It is true, that all animals are exceedingly fond of salt; their nature craves it; they eat it with the greatest avidity, especially when they have been long without it; and, therefore, they are liable to be injured by it. If they are allowed to have salt every day, they will never eat too much, or be injured by it. It is only when they have been a long time without it, that they devour it with so much greediness as to be injured by it. The daily use of salt, in moderate quantities, is exceedingly beneficial to them; but large quantities devoured by them, after they have been long without it, are almost always injurious. Besides, the daily use of salt enables animals to take on fat faster than they otherwise would. The salt they eat acts also as a vermifuge, destroying many kinds of worms in the intestines of animals, and conferring a healthy tone of action throughout the whole animal economy.

My practice is to allow animals to have daily access to salt. They eat it moderately almost every day, both in summer and in winter; and yet I never had an animal eat so much as to be injured by it. I do not believe, they ever will eat too much, if they have access to it every day. I always keep a trough full of salt in the yard under cover, and allow every animal to eat as much salt as it pleases.

About two years ago, I purchased a cow that had not been properly salted. She appeared to

be almost crazy to get at the salt-trough; and it was difficult to keep her away from it. I salted her privately every day for a week or more, giving her a moderate quantity, but not allowing her to go to the trough to eat as much as she would. During all this time, she was gnawing all the old boards, bones, rags and scraps of leather that came in her way. After a while, she calmed down, and became very gentle and tractable, eating only a moderate quantity of salt, but still continuing to gnaw the articles above mentioned. I then purchased some bone meal, and fed her on that. After eating it freely and voraciously two or three times, she refused to eat any more, and immediately left off gnawing those articles.

Not long since, I bought a cow of a man who keeps a livery stable in this town. He sold the cow, because she was all the time gnawing his harnesses, and he could not keep her from them. When I first had her, she was as crazy and restless as a June bug. She evidently had a craving appetite for something beside her ordinary food. I gave her a pailful of swill daily, and a moderate quantity of salt. She ate them both greedily, especially the salt. Her appetite for salt was soon satisfied in a degree; she became very quiet; and she is now allowed to have free access to the salt in the trough, and she never eats too much of it. I do not think I have entirely cured her of her propensity to gnaw harnesses, because it is highly probable that other elements beside salt are needed to accomplish this object. But I do believe that she will gnaw them with less avidity than before, and that the habit of gnawing them was superinduced by neglecting to give her regularly a sufficient quantity of salt. Be this as it may, I shall soon put her to the test. If she still shows a disposition to gnaw things, I shall feed her on bone meal, if I can obtain it in this neighborhood. If I fail to obtain that, I shall sprinkle ashes with her other food; or, perhaps, still better, I shall give her small doses of soap for a few days, till her appetite for such things is entirely overcome.

JOHN GOLDSBURY.

Warwick, Dec., 1861.

WORKING HOGS.—The *New England Farmer* says: "We do not work our hogs, either in harness or on the manure heaps. An Irishman can overhaul the manure heap much cheaper than the hogs can." This is all very well, but still we see no objection to letting store hogs root in the barn yard and pick up scattered grain, &c. On a farm where much grain is fed out, a few young hogs can be wintered in this way at a very trifling cost.—*Genesee Farmer*.

REMARKS.—Certainly. One objection to *working hogs* is, that they are kept half starved in order to *make them* work. This process is cruel to the animals and wasteful to the owner of them.

STATISTICS go to prove that tea is used, more or less, by one-half of the human race—500,000,000 of people. Theine is the peculiar organic principle which gives tea its value. Taken in small quantities, tea is healthful; but the extract of one ounce taken per day, by one person, produces trembling of the limbs and wandering of mind.

For the New England Farmer.

IMPORTANT THINGS TO KNOW ABOUT BUILDING.

One of the faults of our New England people is their great haste. No sooner is a thing conceived, than it is produced. This is commendable in part, and will do in some directions, but not in all.

We astonish the eyes and senses of an Englishman, who may chance to call at some New England village, when we show him round and tell him that two years ago, there was not a building in this place, except that old mill you see down yonder. We shall be amused as well as instructed by his complimentary reply, which we shall perceive is meant more for himself than for us. After stretching himself up into a very significant attitude, he says, "Well, you are a very fast people; you grow up wonderful quick. But we don't do things after this sort in Hold Hingland. Our cities are not built up in one year. Neither will you see them come tumbling down the next."

It is true that many of our New England villages grow up like mushrooms, and are not much more durable. Some men pretend that they are doing a wonderful good thing for the poor people, when they go into a place and stick up a cluster of slash houses, and offer great inducements for people of small means to purchase a new house, very cheap, and make for themselves a nice little home. And by fair speeches and a little putty, many poor fellows are seduced into their clap-trap. They buy a cheap house, pay down some two hundred dollars, (all the house cost, very likely,) give a mortgage to the builder for the balance, which, of course, "may lie as long as you wish;" but before another sun has set, that nice little mortgage has slipped into the hands of a certain money-changer, at some twenty-five or fifty per cent. discount, and the builder has pocketed a smart profit, and gone home to smoke his cigar. The poor man, with his cheap house, soon begins to learn, by every gust of wind and every shower of rain, how badly he has been cheated, and in a few years his nice little house is worthless. The result of the whole operation is this: The builder made a little money, created a nuisance, and made people poorer. My advice is, never buy a slash built house, no sooner than you would an English shoddy blanket.

But, Mr. Editor, this is not what I was going to say. Mr. Harney, of Lynn, has contributed drawings of some very elegant looking mansions and cottages. They look inviting enough to give most any one a longing to possess one; yet they are lacking in many of the most essential conveniences that a farm-house needs. To make a dwelling delightful and pleasing, we must unite convenience with style and beauty, or they may prove to be like Jefferson's wind saw-mill on the hill. Having had considerable experience in building, I will state what I deem of great importance in the materials for building. All the lumber should be seasoned and dry before worked; as a general thing, very little attention is paid to this, except for the finish stock. To make a tight, durable roof, both boards and shingles should be dry when laid; else the shingles will crack between the nailing by shrinking. Nail the shingles pretty well up, to keep them from the wet. Nails driven into unseasoned stock will rust off, after which the shin-

gles will give themselves up to the winds. It is always cheapest to use the best pine or cedar shingles on a good building. When perfectly dry, paint two coats with Brandon red, which may be mixed with a cheap oil, prepared for such purposes; though the best linseed oil is most durable; add a little blacking, to give it a deep red color, if you fancy it. A roof well covered in this manner, is done for a lifetime. It is a great mistake that people do not paint their roofs; it is just as essential for their preservation and durability, as for the clapboards on the sides. The boards for the side should always be dry; else you will find your clapboards cracking by reason of the boards shrinking.

A. PHILBRICK.

East Saugus, Mass., Dec., 1861.

For the New England Farmer.

CATTLE GNAWING BONES.

Inquiries are constantly made, and many times answered, in relation to the cause and cure of this singular habit of cattle—more particularly cows. Cows kept on white grass hay in winter, or in white grass pastures in summer, will almost inevitably indulge in this practice. The cause is undoubtedly the loss of carbonate of lime in the system, from an absence of carbon and lime in their food. When the lands of New England were new, this phenomena was unknown. It is the natural result of an exhausted soil. When cows are fed upon clover, hay or grass, or other articles of food which contain all the elements which enter largely into the secretion and production of milk, the instance will be rare in which they will meddle with chips and bones. The great mystery of the cause lies more immediately in the want of a knowledge of the sciences which reveal nature's process for changing earth, air and water into bread, milk, meat and clothing. A sufficient quantity of milk for the manufacture of a firkin of butter will require all the caustic lime, in a crude state, that is contained in the butter in an organized condition, and if not supplied in the animal's daily food, will draw on the system for such supply, which has been organized there for the purpose of making bone. *Where and what* these materials are, and *how* they can be so combined as to produce the greatest quantity of milk without destroying the vital organism of the system, are questions which interest every person who owns a cow. Early cut clover, Timothy and red-top are sweet, juicy and nutritious, and possess the power to produce milk and make bone. So a grain of corn, for instance, possesses in a well-organized arrangement, the phosphate of lime and magnesia; also the salts of iron, lime and starch, which enter largely into the composition of bones, and most of the glutinous matter to be found in lean meat, tendon, tissue, and the jelly found in bones. Cows fed upon these vegetable materials can have no hankering for chips and bones.

A neighbor of mine says one-half ounce of saltpetre, (nitre,) given in some corn meal one or two mornings, will effect a temporary cure. Every farmer who has none but white grass pastures and white grass hay, may rest assured that his cows will give *white* milk, hanker for chips and bones, and *limp* with the "bone ail." L. L. PIERCE.

East Jaffrey, N. H., Dec., 1861.

ORNAMENTAL PEAR TREES.

BY WILLIAM SAUNDERS, LANDSCAPE GARDENER, GERMANTOWN, PA.

[We are indebted to the kindness of the Publishers of the *Horticulturist* for this beautiful cut of a *Buffum Pear Tree*. The accompanying remarks we also copy from the same work.]

There is probably no species of tree that produces greater variety in form of growth than the pear. It would be difficult to imagine any form in a deciduous tree that is not duplicated in some of the great variety of this fruit. Those of a spreading growth frequently assume that dependent habit so much admired in the Elm, Linden and Silver Maple; of such are the Summer Bonchretien, Beurre de Capiaumont, Beurre Diel, Beurre de Ranz and Passe Colmar. The round, compact form of the Seckel is readily distinguished. The symmetrical growth of Vicar of Winkfield, Tyson, Buffum and many others, is not excelled among deciduous trees, as may be seen from the accompanying engraving of the last named, which is a faithful representation of a tree growing in the grounds of Messrs. Ellwanger and Barry, Rochester. I can vouch for its accuracy, having accompanied the artist, Mr. Hochstein, while he was *taking* it. This tree possesses much of that refined massiveness of habit, and graceful delicacy of stem, the perfection of which belongs exclusively to the Sugar Maple.

There is as much beauty and variety in the foliage of pear-trees as there is in their habit of growth; the broad deep green leaves of the Vicar of Winkfield, Napoleon, Chamoisine, the Jaminette, and particularly the beautiful glossy foliage of Baronne de Mello, are always admired.

The fall coloring may also be noticed; among the most decidedly effective are the White Doyenne, Doyenne Boussouck and the Buffum. The Glout Morceau, one of the most beautiful of pear-trees, retains its leaves fresh and green after all others fade; indeed, this plant grows so freely, and at the same time so *stocky*, that I would suggest its use as a hedge plant, for dividing lines in the fruit garden; few plants are better adapted to this purpose.

[The suggestion of Mr. Saunders, that the Glout Morceau should be used as a hedge plant, is a somewhat novel one, and we should be glad to see it put in practice. With proper attention to pruning and thinning out, a hedge of this kind might be made both useful and ornamental; the fruit,



BUFFUM PEAR TREE.

we think, would ripen fairly, and fully repay any extra labor that might be bestowed upon it.—ED.]

A FARMER IN THE CHAIR OF STATE.

Below we give an article from the *Providence Journal*, speaking in very complimentary terms of our friend and associate editor, Farmer HOLBROOK, of Brattleboro', Vt. The title, "His Excellency," will confer no honor upon him, that he will not reflect back upon the title, by his manly virtues and genuine worth AS A MAN; for in whatever position he has been tried, he has been found true to the convictions which he has avowed. Long and long ago, he undoubtedly might have occupied the Chair of State, had he stooped to "barter" a little for the gilded bait; but if the thought ever occurred to him, it was only to be instantly spurned. But when a common calamity befel us, and political trading gave place to a patriotic enthusiasm, he was first in the hearts of the people, who elected him at once to the highest political position in their gift. He will honor that position, and prove that the State may come to his class more frequently for those who have the ability to secure her interests and extend her renown.

THE NEW GOVERNOR OF VERMONT.

Vermont has honored herself in the choice of her new Governor—Hon. Frederick Holbrook, of Brattleboro'. His election was not brought about by political maneuvering, but was *the people's* spontaneous tribute to true worth and manly honesty of character in one of their own number.

Mr. Holbrook is not far from forty-five years of age; had the ordinary common school and academic advantages in early life; fitted for business with bright prospects which were suddenly darkened by the disastrous failure of the concern in which his father's large property was involved. Thus, in his opening manhood, he was not only thrown upon his own resources, but sorely hampered in the pursuit of any gainful calling.

Left with the care of an aged widowed mother, he undertook the culture of the few acres which were her dower. To the severe labor and thought required to wrest from these a subsistence for his growing family, Vermont, New England, and indeed the agricultural world, owe the advantages they have reaped from his great improvements in agricultural implements, and the numerous valuable articles on practical farming which have made his name widely known.

The improved plows of Ruggles, Nourse & Mason, adapted to every variety of soil and work, are largely the product of his experiments, observation and study, as are many farming implements that bear the names of other men, but owe their existence to his practical and observing mind.

He was one of the founders of the Vermont Agricultural Society, and for the first eight years its President. In that capacity he probably did as much by speech and pen as any man has done to develop the internal resources of the State. It is but just that she should recognize the obligation by this high mark of her confidence.

Governor Holbrook has no taste for politics "as a trade," and has generally avoided political life. In the Vermont Senate, however, he showed

marked abilities for legislation. His report upon the subject of an Agricultural Bureau, made to the Senate in 1849, was a paper of marked value; and had not our politicians at Washington been too busy with party measures to act on its wise suggestions, it would now be pouring treasures into the granaries of the country and greatly enriching our farmers.

Gov. Holbrook's recent Inaugural Address is characteristic of the man: modest, simple, terse, direct, patriotic, Christian; its whole tone and spirit show that its author appreciates the importance and bearing of the exigency in which he has been called to bear the responsibilities of office, and that he will prove himself the worthy standard-bearer of a State that now, as of old, is well sustaining her own and the nation's honor, alike at home and in the field.

For the New England Farmer.

NATURAL SCIENCE FOR FARMERS.

MR. EDITOR:—An article in your last number calling attention to the advantage of a knowledge of natural science to farmers, touches the right key, and I hope those farmers' boys and young farmers, who have not already acquired a pretty good knowledge of chemistry, philosophy and botany, will take up at least one of these this winter. The long evenings will afford ample opportunity for an intelligent young man to obtain considerable knowledge of one or two, or even all three of these branches, so intimately connected with practical farming. The "hard words," or "technical terms," which are so apt to frighten the "uninitiated," will quickly disappear when one obtains a little knowledge of their derivation and the reasons for their use.

Aside from its application to the composition of manures, an item of no little consequence in the present state of agriculture, a knowledge of chemistry is almost indispensable in every branch of farm operations. Is it necessary to give medicines to a sick animal, it aids us greatly in exhibiting the nature and probable effect of such medicines; do we wish to preserve the products of the farm, it tells us the nature and process of decomposition, and what is likely to arrest it; it tells us, too, in the operations of the kitchen, what preparations are deleterious or otherwise, and in its application to vegetable growth, it enables us to understand and act in accordance with the laws of growth.

Philosophy, too, must be understood by every farmer who would keep up with his profession, especially if he would reap any advantage from the improved machines and implements which so much facilitate the labors of the farm at the present day, and even if he uses no implement more complicated than a common lever, some knowledge of philosophical principles will often save half the labor otherwise expended.

Both these branches can be pursued to advantage during winter, and so long as man's principal aim is "the pursuit of happiness," it is my firm belief that independent of their practical application to business, any intelligent man would be amply repaid for the time and labor requisite to obtain a knowledge of them, by the insight which

he would thereby add to the operations of nature which are daily at work around him.

Botany, although necessary for winter study, and perhaps even more toward the ornamental, may still come in for a share of attention, now and then; with its principles acquired, no time need be lost in going into the practical part when spring arrives, and while it is a valuable aid to the strictly practical farmer, and well worth the trouble necessary to its acquirement, it is absolutely indispensable to the highest success in horticulture and its kindred branches. While the practical agriculturist, who, through ignorance of its principles, exposes himself to derision if not serious loss, by belief in such doctrines as the transmutation of wheat to chess, the mixing of potatoes in the tubers, &c., the horticulturist and seedsman are liable to serious mistakes at the very foundation of their business, unless a knowledge of botany is included in their education.

But there is another view of the subject which I consider especially important. In every well organized mind, there is more or less love of the beautiful, and this almost exhaustless source of innocent pleasure is more fully brought out and directed to its proper channel, the vegetable creation, by this study, than it can be by any other means and at the same time, the close attention to the minute organs of flowers, required in practical botany, tends to develop the perceptive faculties.

In this, too, it is sufficient compensation for the knowledge-loving student to be able to name the plants and trees which grow along his path, to know their uses and their origin, habits of growth, &c.

WILLIAM F. BASSETT.

Ashfield, Dec. 2, 1861.

RYE FOR SHEEP.

Rye is one of the most valuable of the green feed for sheep. A friend of ours, an amateur farmer, who has his means all locked up in real estate, but who is determined to make it pay his expenses in spite of the hard times for all the real estate speculators, enclosed four hundred acres, which he rents out on shares, the most of which has been cultivated in corn since the crash of 1857. Beginning to fear that his third of the corn crop would not pay his taxes on some thousands of acres of wild land, with his other expenses, he applied to his arithmetic, which convinced him that a thousand good mutton sheep would help him out; so after the corn was laid by, he persuaded one of his tenants to allow him to sow some thirty acres of rye among the corn. His thousand sheep were purchased in August, herded wherever he could find feed until the corn was ripe, when they were turned on the young rye, which was their principal feed until the first of June, when it was turned under and planted to corn. A portion of the crop was well fed down, but had it not been for the standing corn stalks, a respectable crop could have been harvested from a part of the field. Here was the large part of the feed of a thousand sheep for eight months, costing \$12 for the seed and about the same for labor, and returning the land in far better condition than it was before, no doubt to the extent of the seed and labor. We have never seen a lot of sheep and lambs at this season in so good a condition as this rye fed flock.

The flock is now on the prairie, and will remain there until his meadow is ready to turn into, when the rye pasture will be repeated. He will clear at least \$1,500 the first year in this operation, the result of brains in farming.—*Illinois Farmer.*

MANUAL OF AGRICULTURE.

This is a new work on agriculture, especially designed "to supply an important defect in the instruction of youth," but there are few farmers who may not find in it stores of wisdom and pages of facts, a knowledge of which is important to success in their business. It has been prepared by two persons as competent as any in the State to supply such a work, viz:—Mr. GEORGE B. EMERSON, author of a Report on the Trees and Shrubs of Massachusetts, and CHARLES L. FLINT, Secretary of the State Board of Agriculture, and author of a Treatise on Milch Cows and Dairy Farming, and Grasses and Forage Plants, &c. Mr. Emerson prepared the first thirteen chapters, and the twenty-first chapter upon the Rotation of Crops, and Mr. Flint the remainder, commencing with the fourteenth chapter. We have read every page of the work with minute attention, and are free to say that we believe it to be the most valuable work yet published, not only for the "instruction of youth," but for the instruction of our farmers generally. In order to show the nature of the work better than we can show it by any explanation, we will extract a few paragraphs, and begin with the first three in the book.

1. Agriculture is the art of cultivating the earth. It includes whatever is necessary for finding out the nature of the soil, clearing up the land, rendering it healthy, and preparing it for tillage, and plowing it, and the sowing, weeding and harvesting the crops.

2. The object of agriculture should be to enrich the earth, and make it produce the largest crops, of the greatest value, at the least expense of land, time, and labor.

3. In order to attain this object, the husbandman must have capital,—that is, money for the necessary expenditures; labor, or hands for the operations required; knowledge of the best ways of working; and intelligence, in order to direct the application of the capital and labor.

This is sufficient to show the reader the pleasant and familiar style of the work. In clearing the way to speak of the subjects which he must introduce as he advances, Mr. Emerson is obliged to speak of that bugbear word *science*, and he does it in so plain and attractive a manner that all will be charmed, rather than repulsed by it.

"Science," he says, "is exact knowledge, obtained by the observation and experience of many observers."

"You see, then, what is the *use* of a scientific knowledge of the principles of agriculture. It prepares a person for the practice of agriculture."

Mr. Flint, we think, has been equally happy in his portion of the work. The subjects which have come under his care, are concisely and perspicuously treated, and will make a great many points plain, which have heretofore been surrounded with mystery to the common farmer. His chapters on the "Economy of the Farm," and the "Economy of the Household," are especially worthy of the most careful reading.

We not only hope that the book will be introduced into all the schools of New England, but that a copy of it may also be found on the table of every farmer. Messrs. Swan, Brewer & Tileston, 131 Washington St., Boston, are the publishers.

HOW TO CURE HAMS AND SIDES.

There are many ways to cure hams, but some of them are not desirable, unless we are satisfied to eat poor hams in preference to good. A ham well cured, well smoked and well cooked, is a favorite dish with most people, but there are very few indeed who can relish ham which has been hardened and spoiled by salt, or tainted for the want of salt in curing, and may be worse spoiled in cooking; but if ham is spoiled by too much salt, or too little, or becomes tainted before the salt has thoroughly penetrated through it, I defy any cook to make a good dish out of it. I have tried many ways in curing hams, and have lost them sometimes by having them become rancid and tainted in warm weather, and also by having them so salt and hard that they were unpalatable.

I have for some twenty years practiced the following simple recipe in curing pork hams and shoulders, and find it preferable to any recipe I ever tried, and when I have had any to sell they have taken the preference of sugar cured hams with those acquainted with them.

I trim the hams and shoulders in the usual way, except I cut the leg off close up to the ham and shoulder, to have them pack close, and as being worthless smoked; then sprinkle a little fine salt on the bottom of a sweet cask, and pack down the hams and shoulders promiscuously, as they will best pack in, and sprinkle a little fine salt on each laying, just enough to make it show white; then heat a kettle of water and put in salt, and stir well until it will bear up a good-sized potato, between the size of a quarter and a half dollar; boil and skim the brine, and pour it on the hams boiling hot, and cover them all over one or two inches deep with the brine, having put a stone on the meat to keep it down. I sometimes use saltpetre, and sometimes do not; consider it useless, except to color the meat. I now use my judgment as to the time to take them out of the brine. If the hams are small, they will cure in three weeks, if large, say five weeks; again, if the meat is packed loose, it will take more brine to cover it, consequently more salt will penetrate the meat in a given time than if it is packed close; on this account it is useless to weigh the meat and salt for the brine, as the meat must be kept covered with the brine, let it take more or less. Leave the casks uncovered until cool. When the hams have been in brine long enough, I take them out and leave them in the cellar, if the weather is not suitable to

smoke them. I consider clean corn cobs better for smoking meat than anything I have ever tried, and now use nothing else; continue the smoke until it penetrates the meat, or the skin becomes a dark cherry brown. I then wrap the pieces I wish to keep in paper, any time before the bugs or flies have deposited their eggs on them, and pack them down in casks with dry ashes, in the cellar, where both hams and shoulders will keep as good as when packed, through the summer or year. Cured in this way, it is hard to distinguish between the shoulder and ham when boiled.

A large ham will often taint in the middle before salt or brine will penetrate through.

HOW TO CURE SIDE PORK.

So much for smoked meat; now if any one wishes to have his side pork a little better, and keep better than any he has ever had, let him try my way, and if he is not satisfied, let me know it through the *Ohio Farmer*.

Take out the bone and lean meat along the back, cut and pack the pieces snugly in the barrel, put more salt on the bottom and on each laying of meat than will probably penetrate the meat; then boil and skim the brine (if it is sweet,) and add enough to it to cover your meat two or three inches over the top, made strong like the ham brine; and as soon as you pack your meat, pour the brine on boiling hot; it will penetrate the meat much quicker than cold brine, and give it an improved flavor.

While I was making and pouring the brine on my hams and pork just now packed, I thought the public might be benefited by a knowledge of my way of curing meats. I therefore publish it. Try it.—A. AYLSWORTH, in *Ohio Farmer*.

AN IMPORTANT WORK.—Mr. Kennedy, superintendent of the census, is causing the preparation of a work at his Bureau, which is of the greatest interest. Taking some sets of large maps of States which are in possession of the government, he causes to be written over the spaces designating counties the number of whites, free-colored, slaves, and men between eighteen and forty-five years of age in such counties; also, valuable animals within such limits, as horses, cattle, hogs, sheep, &c. The quantity of leading agricultural products is also noted, and railroads, canals, turnpikes and high roads are accurately delineated, with distances between principal places.

The maps in question are of great military value at this time, and hence Gen. McClellan has detailed several competent persons to make transcripts for the use of the army. Just now the work is confined to States which are seats of war, but it is intended to extend it to all the States, and in the end to have appropriate shadings to represent mineral regions, &c. &c.—*Baltimore Sun*.

THE HORTICULTURIST.—The December number of this popular periodical is before us, and, as usual, elegant in its appearance. It is illustrated by beautifully painted engravings of the "Senior Wrangler," "Diophantus," and "Moor" geraniums. The editor's leader is a continuation of his "Hints on Grape Culture," and is upon the subject of composts and manures.

ON PROTECTING NATIVE GRAPES IN WINTER.

BY PRATIQUER.

It is our duty to profit by experience. The results of the past year have taught a lesson to be improved by vineyardists, as a matter of pleasure as well as profit. Among those who laid down their grape-vines in the fall of 1860, are now, at the fruit-ripening season, to be seen many cheerful countenances, the owners pointing with glowing satisfaction to well-loaded vines, bearing ripe, delicious grapes, produced, as they firmly believe, by their discretion in protecting the vines a year ago, some of whom, I am happy to say, have realized a money value for their products which enables them to say that grape culture is profitable, as well as pleasurable. The protection of vines in this Northern climate is a necessity; they may escape five years out of six, and yet, if the crop is lost once in that time, the grower not only loses his crop, but very often loses his confidence, so that he neglects to prune, cultivate, and train, and perhaps, through carelessness and neglect, loses his crop of future years, and ultimately the cost of his vineyard. When one sees a neglected vineyard, and inquires the reason why it is not cared for, he is often told, "It won't pay." Why not? "Because it is so much trouble to cover the vines in winter." Let us look at this, and see if it is so. The writer, who is an enthusiast on grape culture, desirous to try experiments, lost many of his vines by a neglect to cover them, by leaving them tied to the stakes and trellis, to see what would happen to them, while the other portion, covered with earth, or laid on the ground and covered with leaves and snow, were not only in good order in the spring, but have borne abundantly of good ripe fruit, and have already ripened wood for another season, ripening both fruit and wood many days earlier for their protection. A neighbor, with a large vineyard, producing annually many tons of grapes, covered a part of his vines, which have yielded bountiful crops this season; he has lost, by his estimate, from two to three thousand dollars on those left exposed, the expense of covering which would have amounted to a trifle less than two hundred dollars. Omitting this small expenditure, his unprotected vines have barely paid the expense of cultivating the past summer; indeed, a part of his vineyard has not even been plowed this season, showing that he was discouraged. I could cite many more instances, if necessary, but a word to the wise is sufficient. It must be remarked, that the winter of 1860-61 was the severest upon many fruits that has been experienced during the present century, either on this continent or in Europe. The cold was intense for perhaps twenty-four hours at a time, and was preceded and followed by moderate weather, with a clear winter sun. There is good reason to believe that native grapes would bear the severest cold if they were not suddenly exposed to a bright sunshine, after being congealed into solid ice; it may not, therefore, be necessary to bury them in the ground, but it is undoubtedly the most economical mode of protecting them, is found to be effectual in every instance heard of, and is doubtless attended with less trouble than any other method of covering and protecting known. It can be done rapidly; with an hour's practice, a man becomes very expert.

First, let the vines be pruned and trimmed ready for tying in the spring; then run a plow two or three times between the rows, near the middle, say about three or four feet from the stakes or trellis, and so far from the vines as to lay no roots bare; then let two men work together, one of whom gathers the canes, and holding them together, lays them on the ground lengthwise of the rows, while the other throws two or three shovelfuls of earth to anchor them, and continues to throw on more earth, where needed, until the first is ready with more canes from the next vine. They proceed thus through the row. Returning, they each use the shovel to complete the covering. It may all be done in less time than the two men would dig a row of potatoes. This is much easier and less expensive than covering with straw; besides, straw beds become harboring-places for mice, which often damage the canes when short of food. Another method is to construct hurdles to lay over the vines, but it is both troublesome and costly, except on a small scale. Vines are sometimes well protected by laying on the ground, with stones upon them, to prevent swaying about in the wind. There are some hardy varieties which have withstood the vicissitudes of our climate, and which may be said not to need any protection; but they may live in one location, and be winter-killed in another; or, under varying circumstances, the wood of one may be more perfectly ripened, and thus be able to stand severer tests. *It is better to cover them all*: they are then sure to come out all right, and will bear their fruit three to five days earlier for it, which is an item of great importance, adding more value to the crop than all the labor and expense of protection. In the spring, the canes may be lifted with a garden fork, and allowed to lie on the ground until the proper time for tying to the stake or trellis.

REMARKS.—For several years we have practiced the mode of protecting grape vines in the winter described above, and have invariably found them to come out in the spring appearing more fresh and vigorous than those left upon the trellises or stakes. The labor of laying them is not much, and, compared with the advantages gained, is undoubtedly a profitable labor. When covered, the cultivator should not be in haste to take them up in the spring, as the bark, by being kept moist through the winter, is tender, and is in danger of being injured by a night or two that is colder than is usual in the spring, if followed by hot suns during the succeeding days. We have sometimes let them remain with advantage until the middle of May.

THE BEES AT WAR.—A great battle of bees recently occurred at Conneaut, Ohio. Ezra Dipple had seventy swarms, about equally divided on the east and west sides of his house. On the 17th they went to war, those on the west side of the house being arrayed in battle against those on the other side. They filled the air, covering a space of more than one acre of ground, and fought desperately for three hours—not for "spoils," but for conquest; and while at war, no living thing could exist in the vicinity. They stung a large flock of

Shanghai chickens, nearly all of which died, and persons passing along the roadside were obliged to make haste to avoid their stings. Quiet was not restored until nightfall. Two young swarms were entirely destroyed, and the slain literally covered the ground. Neither party was victorious, and they only ceased from utter prostration. The cause of this bitter outbreak among creatures so redolent of sweetness, is quite unaccountable.

CULTIVATION AND PROPAGATION OF THE PINE TRIBES.

A correspondent of *Hovey's Magazine* writes concerning the propagation of the Pine and Fir tribes, in an article replete with interest, from which we make these extracts:

With respect to the soil and situation best adapted to the Abietinæ, some inference may be drawn from the fact that pine and fir forests are most generally found upon a soil composed of the debris of granite. Hence the prevalence of this family of trees near the summits of high mountains, and over large portions of North America where the different forms of granite distinguish the geological character of the soil. A sandy loam and a cold subsoil seem to be the most favorable conditions for the growth of coniferous trees. Our white pine requires a richer soil than the other American species, and the larch excels all the others in a mean soil. The native habitats of the hemlock are very wet, and often partly submerged in water, yet these conditions are not necessary to it. In fine, there are but few of the conifers that will not do well in almost any soil after they have been successfully transplanted and raised to a growing condition.

The usual method of propagating all the species is by seeds, immense quantities of which are annually collected in different parts of the world, by collectors of Great Britain. It is common with us to transplant the White Pine from the woods; but very few other species will bear this process, unless they were raised from the seeds in a plantation. The most certain and economical mode of obtaining a plantation of conifers is to purchase them from the nurseries. The artificial treatment they have received from the first, under the hand of the cultivator, modifies their nature, so that any species, even the hemlock, may always be successfully removed from the nurseries, under the right circumstances of time and season.

In England, it is no unusual thing to propagate certain species by cuttings; but the pines cannot be treated in this way. Cuttings are taken from the lateral branches when the recent shoots are beginning to ripen; they are planted in sand and covered with a glass. This is usually done on the last of August, or a little later; the cuttings are kept in a frame and protected from the frost, and will be found to have struck their roots on the next May or June.

They may afterwards be transplanted in the autumn. The Silver Fir, the Spruce and the Larch, are found to bear this process well; but the practice is not likely to be followed to any considerable extent in this country. Grafting has also been successfully practiced with several species.

The method of raising by seeds is, however, the

most practicable; and in the gathering and planting of seeds a great deal of judgment and experience is required. The cones of some species ripen in one year, in others not until the end of two years. It is advisable to collect the cones a little while before they are perfectly ripe, when they are liable to drop their seeds. In the European trees the seeds usually drop from the cones in March; here the time varies with our latitude and climate, and with the different species.

The cones of the Hemlock are mature in the autumn, when they begin to shed their seeds, continuing to do so all winter; those of the Pitch Pine are mature at the end of the second autumn; those of the White Pine require also two years for their maturity, and ripen in the autumn. Hence the proper time to gather the cones of our native species is during the fall of the leaf.

EXTRACTS AND REPLIES.

DRESSING UP FLAX.

I wish to inquire through the *Farmer*, if there is machinery for getting out flax, either rotted or unrotted, as the raising of flax is profitable, if the cost of dressing it was not so much?

Chelsea, Vt., Dec., 1861.

ELI CAMP.

REMARKS.—There is. A cheap process has been discovered whereby flax may be prepared for the "brake" in the course of a few hours,—and then it is run through a machine at the rate of a ton per hour, perhaps, completely separating the fibre from the woody part of the stem. With these facilities for dressing, and the constant demand of the seed for its oil and as feed for cattle, it seems to us that flax-raising might be made profitable on many of our New England lands.

TO PREVENT POSTS BEING THROWN BY FROST.

Last spring there was much complaint about fence posts being thrown out of the ground by the frost, and a request to know what would prevent it. Several things were proposed, such as setting the fence with stone, &c.

There is one thing that I think will prevent it, if not too expensive, which is as follows: Put about a pint of coarse salt around each post, or enough to prevent the ground from freezing, and the post will not be disturbed. There will be another advantage from the salt. The post will last twice as long as without it. It should be put about the post about the first of December each year. The fence between the posts must not rest on the ground.

X.

THE WEATHER.

Nov. 28.—Thanksgiving.—Weather is fine and moderate; but little snow, not enough for sleighing. Jack Frost, however, has rendered his stay so far serviceable as to pave the ways and by-ways, so that wheeling is very good.

Nov. 29.—Morning.—Snowing finely. P. M.—Cloudy and moderate. Two or three inches new snow; enjoyed the first sleigh-ride of the season.

Dec. 1.—A. M.—Quite moderate; cloudy. P. M.—Snowing, though damp. Eve.—prospect of sleighing.

Dec. 2—Morn.—Cooler, six inches new snow. A. M.—Cooler still. "Old nor' wester" begins to exhibit itself among the newly laid snow-flakes. P. M.—Wind cold and blowing—later, real March bluster!

Dec. 3—Weather clear and cold, mercury 20° below freezing point. Quite a sudden change. Young winter is really quite *lionish*; hope he may deem it best to exhibit to his subjects more lamblike qualities after he has become more accustomed to his throne, and the novelty of his elevated position has worn away.

Lyndon, Vt. I. W. SANBORN.

MILLET SEED FOR HOGS AND HENS.

Will you please state, in your next number, the good qualities of millet for feeding hogs and hens? Will you state how much, per bushel, I should pay in order to feed it to hogs, &c., so as to make a profit above buying meal? G. E. M.

Somerville, Dec., 1861.

REMARKS.—We have never known millet seed fed to hogs or hens. It would, no doubt, be good for either, but what its value is, compared with other grains, we are unable to say.

QUERIES ABOUT POULTRY.

I notice that Wm. Robinson, of Watertown, gives us a very good and profitable account of his poultry business. Will he not give us a description of the manner he kept them? Did he keep them cooped? How large a coop he had? What kinds of food he gave them? How he managed his chickens when small, &c.? B. F. T.

South Groton, Dec., 1861.

Bronze Turkeys.

Can you, or some of your readers, inform me where and at what price I can obtain a pair of full blood large bronze turkeys?

R. GOODELL.

Antrim, N. H., Dec. 2, 1861.

CROPS IN MICHIGAN.

Wheat light, particularly the best quality of white winter. Corn very good. Oats light. Potatoes, a good yield, but rot very bad. Apples and other fruit and vegetables plenty. X.

INFLUENCE OF NEWSPAPERS.—In an article in another column, under this caption, the writer, Doctor SILAS BROWN, states that he is "now over eighty-two years old," and yet his manuscript, which now lies before us, is written in a clear, bold hand, and scarcely needs the touch of the pen before sending it to the printer! It is refreshing to receive such interesting facts of the past, clothed in appropriate language, and so plainly recorded. What the Doctor says of Editors we believe to be just. But who make up the newspapers? It is not editors alone,—for, when properly conducted, they must owe a certain portion of their value to the writings of good men who contribute to their columns. In a cheerful, intelligent and vigorous old age, the Doctor's life is illuminated by kind

acts and the dissemination of facts and principles which certainly tend to make the world better. We are always glad to see his familiar hand, and send abroad the sound doctrines which he expresses so well.

For the New England Farmer.

THOUGHTS ABOUT SUGAR MAKING.

In perusing your paper of Nov. 1, I was much interested in a piece written by Mr. BASSETT, on sugar making. I well remember, thirty years ago, my father and others made the whitest of sugar, without any trouble, and coals and ashes were continually flying into the kettle.

I have made thousands of pounds of very poor, and also of good sugar. I have come to the conclusion that nine-tenths of the *poor* sugar is made by sourness in buckets and store tubs. Therefore, too much pains cannot be taken; people are apt to think store tubs, washed at the beginning and end of sugaring, is sufficient. But sourness will collect much quicker than in buckets, and they should be cleansed every few days. I admire Mr. Bassett's views in speaking of boiling, cleansing, arch, grate, &c. His heater is new to me—I think it must be a great improvement, and hope to gain by it. He also speaks of a syphon to carry the sap from one pan to the other, with ends turned up. I tried it to my satisfaction in every way and shape, calculating it would keep the sap in the pans on a level; but when the sap boiled hard, it would fill with steam and stop. I also tried to draw sap from the pan while boiling hard, into a pail, with the syphon ends turned up. It would run two or three pails full and stop, therefore I could not place any dependence upon it. So you see in my plan that you published Nov. 24, 1860, the syphons all extended back to the heater, which seldom boils, there being four pans to draw from it. Let every farmer make an estimate of store tubs and a cistern.

First, the sap in store tubs is subject to the warm air, which causes it to sour. Now a cistern, being in the ground, keeps the sap cool like well water, and being covered up, nothing can get into it, except what passes through the strainer. The cost of a cistern to hold 300 pails full is—

1 barrel of cement.....	\$3.50
To drawing sand.....	1.00
To digging a hole for cistern.....	75
To mason work, laying.....	1.50
Tending.....	1.00
Cost.....	\$7.75

Now add 10 store tubs holding 30 pails full each, which cost here \$2.50 each, \$25.00. If any one should use the self-acting faucet one season, I think they would not wish to be deprived of it. They cost about twenty-five cents apiece, besides the lead pipe. If you wish to be absent, instead of letting your fire go down so as not to burn up your sap, build as hot a fire as you please, and when you come back you will find your pan full as when left, and boiling well; there is no filling up to do—it takes care of itself. I should prefer an India rubber hose attached to the bottom of the boiler, as I described to you, Nov. 24, 1860, and then hook up at the top, rather than a tin syphon which you must fill with sap, and turn over into the hauler, holding on to both ends with wet

hands. I prefer buckets largest at the top, on account of ice, which we cannot always avoid. People in this vicinity prefer the tin spout; those that have given it a thorough trial, say they can get more sap. I use a half round tapering bit, so I can tap over by taking off a small shaving a dozen times if I wish, and then not exceed five-eighths of an inch. They are manufactured by our blacksmiths. Several have tried the experiment here, and have become satisfied that they can get as much sap from a one-fourth inch hole, as from a three-fourths or one inch hole, as it cuts off the same number of grains. ERASTUS WAY.

West Burke, Vt., Dec., 1861.

WILLOW.

This tree is extensively cultivated in some countries, on account of its rapid growth, and the remarkable facility with which it accommodates itself to almost any modification of climate, and every variety of soil which possesses the capability of nourishing vegetable life. When large and full-grown, it presents a venerable and sombre appearance, being more densely foliaged than any other tree, and of a form often singularly fantastical and picturesque. The timber is not much valued, except when young. It is then wrought by the country people into various kinds of ozier or wicker work, such as baskets, the coverings of demijohns, &c. As fuel, the wood possesses nearly the value of white pine, being light and highly combustible, but possessed of little durability. Like most wood of rapid growth, it soon decays, especially when exposed to the atmosphere. Used for rafters, or other purposes where it is kept continually dry, it has some value, possessing the power of holding nails as firmly, almost, as oak. The weeping willow, around which there cluster in most minds, none but most gloomy associations, is an importation from Europe, where it is said to have been first cultivated by the poet Pope, who discovered a slip of it in a basket or package which had been sent to him from China. Some assert that the ordinary willow, if its position be reversed, will be changed into a weeping willow. The foliage of the willow possesses nutritive properties, and in some countries is gathered the same as corn shucks, and cured as a winter feed for horses and neat stock.

It is to be regretted that a greater degree of attention is not paid to the embellishment of our country residences and villages, by the transplanting of ornamental trees. Nothing adds more to the beauty and desirableness of a dwelling than a plantation, tastefully managed, of ornamental trees. No matter how splendid and elegant in architectural design and finish a dwelling may be, if it stands exposed, unembellished and unprotected by trees and shrubbery, it must ever revolt the eye of taste; there is a nakedness about it which is re-

pulsive, a something which requires filling up. And there is a pleasure in planting which all keenly feel who are not utterly callous to the beautiful in nature. "You can have no idea of the exquisite delights of a plantet," says Sir Walter Scott; "he is like a painter laying on his colors,—at every moment he sees his effects coming on. There is no art or occupation comparable to this; it is full of past, present and future enjoyments. I look back to the time when there was not a tree here—only barren heath. I look round, and see thousands of trees growing up, all of which I may say have received my personal attention. I remember, five years ago, looking forward with the most delighted expectation, to this very hour, and as each year has passed, the expectation has gone on increasing. I do the same, now. I anticipate what this plantation, and what that one will be, if I only take care of it, and there is not a spot of which I do not watch the progress."

The time will come when necessity will compel us to accord more attention to this business, and before long, too.

THE LEMON TRADE.

The most delicate varieties of lemons known in the export trade are the Poncine, incomparable, the Naples, the sweet lemon, the Imperial, the Gata, the large fruit and the wax lemon. The most delicious, however, are the hot house productions, which are known only in the conservatories of the wealthy. The peculiar nature of the lemon tree, on which may be seen at the same time the blossom and the fruit in all stages of growth, continues the supply through every month of the year, but in greater abundance in the spring. The importations, which continue during the year are largest from January to June, in which month they seem to culminate. The scarcity of the supply at present is variously accounted for, but may be safely attributed to the general interruption to commerce occasioned by the rebellion of the Southern States. The supply in the market is not always governed by the demand, as there are but four houses in New York who import on their own account, all other shipments being made on account and at the risk of producers. It will thus be seen that the trade is of a precarious character, and not likely to tempt investment. The number of boxes brought to this country from September, 1860, to August, 1861, according to the most reliable figures, is, to New York, one hundred and twenty-five thousand; to Boston, thirty-five thousand; to Philadelphia, thirty-one thousand; and to Baltimore, where the season closed earlier than usual, only eight thousand. This is less by fifty thousand boxes than the importations of the previous year. No natural production varies in price so much as lemons, oranges, and Mediterranean fruits. Ten days ago lemons were worth twelve dollars a box, and this week they are six. Last year the price ranged from fifty cents to seven dollars a box. The price is governed by the immediate supply, as they are purchased for immediate consumption.—*Scientific American.*

COE'S SUPERPHOSPHATE OF LIME.

Having heard and read a great deal about the fertilizing properties of Coe's superphosphate of lime, I determined last spring to make a trial of it myself, and will now give the result.

I bought only one bag, containing 125 pounds, which cost me three dollars, delivered at the farm. The phosphate was applied to corn, potatoes, squash and pumpkin vines, and cabbages. The soil in which the corn was planted is a light loam, of medium depth and quality. About fifteen ox-loads of manure from the barn-yard—a large portion of which was meadow muck, carted in the previous year—was applied to the acre after the land was plowed, and thoroughly harrowed in. I will here state what I have learned from a neighbor the present year; that the cultivator is a much better implement than the harrow, for covering manure spread on the furrow, for it not only covers better, but leaves the ground much lighter. The land was then very lightly furrowed both ways, and the corn planted; nothing being put into the hill except on that portion where the phosphate was used, which was about one-fourth part of the field. On this portion of the field a table spoonful of phosphate was dropped in the hill, and thoroughly mixed with the soil, a pronged hoe being used for the purpose. And here let me say that very many farmers receive no benefit, but much injury, both from the phosphate and guano, simply because they do not take pains to thoroughly mix these fertilizers with the soil. They throw a handful into the hill, kick a little dirt over it, plant the corn on the top, and expect it will grow and flourish in the burning stimulant. The result is, that one-half, or more, of the corn is burnt up, and the other half receives such a powerful dose, that it resembles, all through the season, a person who is always taking physic. At different places through that part of the field where no phosphate was used, and where the nature of the soil is as uniform as possible, four rows were staked off, and the phosphate applied as above. Where the phosphate was used, the corn came up a few days sooner, and until it had nearly attained its full height, was more than a weeks' growth larger, besides being of a much darker green than the other corn. The corn also began to ripen about a week sooner where the lime was applied.

In the hurry of harvesting, I did not ascertain the difference in the yield of corn except in one section of the field. Eight rows through the field—four with the phosphate, and four without, side by side—were reserved, and each of the four rows husked out separately. The rows to which the phosphate was applied, yielded six bushels, one peck and a half of sound ears, and three pecks of unsound ears. The four rows without the phosphate yielded six bushels and one peck of sound ears, and one bushel of unsound ears. To make the trifling difference plain, I will state it thus:

With phosphate...	6 bush.	3 half-pecks sound,	$\frac{3}{4}$ bush. unsound.
Without " ...	6 " 2 " " " 1 " "		

So it seems there was only one half peck more of sound ears of corn in the rows where the lime was used, and one peck less of unsound ears; or, with the good and bad together, one-half peck *more* corn in the rows without the phosphate. But the

corn was riper, the ears longer, and the kernels larger, where the artificial fertilizer was applied.

Perhaps if I had put another spoonful of phosphate to each hill after the corn was up, the difference would have been greater, and more to the credit of the lime; but as it was, the difference was very small compared with some of the *cracking* stories which I have read concerning the astonishing effects of this fertilizer. To have made the experiment more exact, the corn should have been shelled and weighed, but as it was not sufficiently dry at the time of husking, I did not do it. I raise the eight rowed corn, and a bushel of ears will make a large half bushel of shelled corn.

Perhaps it may be well to mention that a handful of wood ashes were applied to every hill of corn as soon as it was out of the ground, with the exception of seven rows through the centre of the field, and where no phosphate had been used. As the corn increased in height, these seven rows looked like a valley through the field, or like Pharaoh's lean kine; the corn in these rows being very small, and of a light green or yellow color. In the rows next to these, where the ashes had been used, the corn was twice as large, and of a much darker green; and next beyond these, where the phosphate was applied, the corn was twice as large as it was where the ashes had been used separately. This proves that ashes, although not so powerful as the phosphate, yet are of great value to the farmer, if he applies them at the right time. The ashes in this instance were applied immediately after a soaking rain; and this, in my opinion, is the best time to make use of them. At the second hoeing, the ground being quite dry, the same quantity of ashes were put on to each hill in the seven rows, which had been used in the other part of the field; but although it rained soon after, yet the ashes did not seem to have the least effect upon the corn, which continued to have the same sickly or starved appearance through the whole summer—the corn being very light at harvesting.

As nearly all the phosphate which I bought was used upon the corn, I tried it upon only one row of potatoes. A table spoonful was applied to each hill, no manure being used. On each side of this row, the potatoes were planted in the usual manner, with one shovelful of manure to the hill. During the first part of the season, the potatoes planted in the phosphate were larger, and of a darker green, than the plants on each side, but finally were outgrown by the potatoes planted in the manure. When the potatoes were harvested, the result was the following, from two rows, each containing the same number of hills.

Row with phosphate.....	1 $\frac{3}{4}$ bush. potatoes.
Row without phosphate.....	2 $\frac{1}{4}$ " " "

It seems that there was about a third more potatoes in the row which was manured, and they were larger; but I have no doubt that had the manure and phosphate been used together, the yield of potatoes would have been greater than where the manure was applied separately. The phosphate was also applied in the same manner as above, to cabbages and squash vines, but without any visible effect after the first two months. The phosphate, although powerful at first, seems to lose its force before the season is over, and does not fulfill what it promises to do in the first part of the season; but I may be wrong in this conclusion as

to its *general* effects upon *all* kinds of land and crops.

I forgot to mention that on that part of the corn-field where the phosphate was used, the crop of pumpkins was more than twice as large, and of a much better quality, than on any other part of the field.

A friend of mine, in North Leominster, used some of Coe's phosphate on part of a mowing field last spring, and the crop of hay was a third heavier than on that portion where none was applied.

I believe that Coe's superphosphate of lime, if rightly used, is a powerful stimulant to plants, and an aid to the farmer; but I also believe that this, or any other artificial fertilizer, can never take the place (and be as beneficial to the land as well as the growing crops,) of animal and vegetable manures, composted together in the barn-cellar, or elsewhere. This kind of food for plants, no farmer can possess too much of, or be too diligent in accumulating and heaping together.

I hope that all who have made experiments with Coe's phosphate, will give the results to the world; for it is only by many different experiments upon all kinds of soil, that a correct estimate of its real merits can be known. S. L. WHITE.

South Groton, Dec., 1861.

THE ESSEX SOCIETY.

We have before us the "Transactions of the Essex Agricultural Society for the year 1861," in a neatly-printed book of 200 pages. It shows as much progress, over its fellows that have preceded it, in the art of printing, as has been made in the cultivation of the soil. The first paper presented is the Address of Mr. ALFRED A. ABBOTT, of South Danvers, and a good one it is. The reports on Plowing with oxen and horses, on Working Oxen, Farm and Draft Horses, on Stallions, Breeding Mares, Colts, Fat Cattle, Bulls, Sheep and Swine and Milch Cows, are all very short, scarcely venturing a remark in regard to any of them, as to their importance to the farmer, or dropping any suggestions that might be valuable to him. The report on Poultry is more at length, and presents facts that are of value to the poultry raiser. The report on the Dairy is brief, but closes with the following capital wish:—"We wish that all of our *young* ladies, while they are learning to play the piano, would also learn to make good butter and cheese. You can please your husband better with ordinary music and sweet butter, than with the sweetest music and rancid butter."

In the brief report on *Pears*, by Mr. JOHN M. IVES, he says,—

Regarding the injury to our fruit trees and grape vines, we apprehend that it took place between the last of February and early in March. The ground was so open in that month that some strawberry beds were forked over and the plants set. On Sunday morning, March 3d, the thermometer, in South Salem, went up to 75° in the shade, and 85° in the sun. On the Thursday fol-

lowing, it was but 10° above nearly the whole day, and upon the 18th, it was only 4° above at sunrise. The Mill Pond was frozen over sufficient for skating.

Such fluctuations of temperature, particularly *thus late*, would, we think, be more disastrous than if they had occurred in December or January. The sudden freezing and thawing of the sap vessels in winter, particularly in the grape vine, causes this trouble; and as the sap is always in motion, at all seasons and under all circumstances, except in the presence of intense cold, as said by that eminent physiologist, Dr. Lyndlay, can we wonder at these results? Biot, a French writer, says that there is a great deal of sap in the spring, and much less at other seasons. He has also proved, by an ingenious apparatus, that the rate of motion of the sap may be measured at all seasons. In mild weather the sap was constantly rising, but when frost was experienced, it flowed back again.

The report on *Flowers* is extended, criticises sharply some bad practices introduced into the exhibition, makes valuable suggestions, and closes with a manly and touching appeal to the farmers of the county, as follows:—

Perhaps our worthy Essex farmers are not yet wholly rid of the idea that raising flowers is "woman's work." So it is; but not the less that of men, by any means. Woman shines in every work of benevolence, but man honors himself in the giving of alms as much as she. Woman is lovely in connection with the education of the young; is not man equally well employed in the same field?

"But," he says, "flowers look charmingly, but have no usefulness; they do no good, that I know of." Suppose it is so; how much good does the carmine do, that you love to see mantling your Red Astracans as well as any one? Is the Baldwin better for its ruby coat, or the Maiden-Blush for the glow that has borrowed it a name from the loveliest of all things? Is the Bartlett more luscious for its gold, or the Tomato for its fine crimson? But the plainest farmer loves all these better for their beautiful hues, and he knows it, and cannot help it, and still those hues have no more of utility about them than the tint or quilling of an Aster. There is just as fine a vein of enjoyment in the farmer's nature as in any man's; nay, he, of all men, is the one to have enjoyment—a full, deep, overflowing cup of it, for his physical system is aptest to be tuned to the true natural harmony, vigorous and strong, and beauty ought to rise on his vision, not in pale, diluted colors, but glorious and warm as a haymaker's sunshine.

Who disbelieves in the culture of a few flowers on the farm, now? If there are any, there is a prospect that they will at some time be given over to hardness of heart. But we must indulge in one more extract—and we know it will gratify many a reader—and thank the gentlemen of the committee before we close:—

The growing of lovely and perfectly formed flowers is as much in harmony with nature as any of the operations of culture. Man is a worker of changes in everything; he has, so to express it,

made the Apple, Peach and Pear; he has made the Potato and the dozen of roots that we think so much of; and shall we call him any more a fool because he has doubled the Rose and Chrysanthemum to make them feed more vigorously the hungry life within. Surely not; let the farmer cultivate flowers; let him raise the very best he can, and show them for his own credit, and to excite a generous competition in the hearts of his brethren. They will be like a red cheek on the sunny side of his own mellow harvest; like the bloom on the features of his own home-fed daughters, which enhances and testifies their worth, though it may not cause it. In their mute eloquence, they shall speak to him of a life higher than the mere flitting present; for his full barn and bin only suggest the idea of ever-returning hunger, but these can minister to a want that bread cannot satisfy, hinting still at the painless experience of an immortal rest, from which they seem like lovely premonitors, always murmuring in the ear of him who notes them,

"O, pray believe that angels from those blue dominions,
Brought us in their white laps down, 'twixt their purple pinions."

The report of the committee on *Cranberry Culture* is brief, but very suggestive. That on *Manures* is valuable. It contains the experiments by Mr. RICHARD S. ROGERS, of South Danvers, a portion of which were communicated to the *Farmer*, and published in February last. What he has added, and now appears in these Transactions, we shall copy hereafter.

The report on *Root Crops* is pretty full, and the statement of Mr. H. A. STILES abounds in sound instruction. The report of the Committee "*On the Improvement of Pasture and Waste Lands*" shows in the clearest light the unprofitable condition of such lands, but presents no definite plan for their reclamation. But one instance is cited, that of OLIVER P. KILLAM, of Boxford, who cut bushes, dug out the roots, made holes eight feet in diameter, and put apple trees in them. This will answer very well occasionally—but what we want, as a general thing, is *pasturage*, not orcharding. An excellent report follows on *Forest Trees*, by JEREMIAH SPOFFORD.

The Society voted to build a new barn on the Treadwell Farm, and also to continue to hold their exhibitions in different parts of the county.

The next paper, by WILSON FLAGG, is "*A Plea for the Birds on account of their Utility to Agriculture*," and is an interesting and valuable paper. Following this is an "*Essay on the Cultivation of Cranberries*," by NATHAN PAGE, Jr., which is full of excellent facts and suggestions.

Upon the whole, this volume of the Essex Transactions fully sustains the high reputation which that ancient county has gained. The Secretary of the Society, CHARLES P. PRESTON, Esq., of Danvers, is entitled to credit for the promptness with which the volume appears, and to our thanks for the copy which we have examined.

For the New England Farmer.

FINISH UP THE WORK.

Time, with its varied and changing scenes, has brought us almost to the close of another year; this is the season which should be improved by the farmer, and is of almost as much value to him as the month of July. In this month he should improve the opportunity presented him in the warm and pleasant days, to complete whatever of his farm work time may not have allowed him to do before. Let not the fine opportunity, which the open fall and tardy winter has presented, be lost.

If the manure has not all been carted from the yard, do it now, and as fast as it is removed from the yard let its place be filled with muck from your meadows. It will amply reward you for your trouble in grass next year, even if you should encounter a little frost before the job is quite done. And when the snow forbids your longer working the soil, look to the wood-pile,—don't let the females of your household have a chance of complaining about green wood, and not enough of it, either; and don't allow yourself to sit around in the house, and see them bring it from the wood-house, when you have nothing else to do.

The cattle, too, don't forget them, the kind beasts that serve us; don't allow them to suffer for the want of a shelter, or sufficient food to satisfy their appetites, though too lavish feeding is bad; but let them have enough to keep them in good condition and still keep their appetites good. If you have poor hay which you must feed out, do it at the commencement of feeding, and you will find that by cutting it up and putting upon it a quart of meal to each creature, each day, there will be but very little of it lost, and you will scarcely feel the expense at all.

The horses, too, and colts, should be looked after with great care through the cold weather. Do not believe the farmer who tells you that it is better for your colt to take things as they come along, in the rough and tumble style, but look after him; give him a warm stable, and plenty of good hay, a few good carrots and a quart of shorts each day, and perhaps two quarts would not hurt him—if not, give them to him. When all the outdoor work is cared for, call upon your neighbor, and examine your accounts for the past year, and, by the way, do not make a day-book of the bel-lows, or a ledger of the fire-frame—such memorandums are worthless.

Lastly, but not least, don't forget to subscribe for the *N. E. Farmer*, or some other agricultural paper equally as valuable, if you do not now take one, for you will find it a valuable counsellor and guide in your business. Let your evenings, which are now long, be spent in gathering agricultural knowledge from some standard work upon the same, and thereby profit yourself and set a good example before your family.

E. P. L.

Ware, Mass., Dec., 1861.

PURE SEEDS.—In our appropriate columns may be found an advertisement of Mr. SANFORD ADAMS, announcing his ability to separate at little cost, all impurities from grain, grass and canary seed. He will, also, shell and clean peanuts for confectioners or family use, and sort beans so that

the number one will all be of the same size, free from all broken ones or spurious seed, and appearing as though they had been through some polishing operation, which they quite likely have. We have seen his machines and found his sifting processes really wonderful. He has brought them to such perfection, and will furnish the means of doing the same so cheaply, that there is no necessity for the farmer, any longer, to sow foul seeds, and thus entail upon himself and posterity a perpetual plague and loss.

What struck us as the most surprising in Mr. Adams' apparatus, is the great simplicity with which he accomplishes so much. He not only separates products of different sizes and shapes, but by the application of screens to fan mills, he does so by their specific gravity.

For the New England Farmer.

PREMIUMS ON STOCK.

MR. EDITOR:—As the "Middlesex Agricultural Society" is an old Society, having been established a long time, must we not expect younger societies of the same kind to look to us for an example? As it respects premiums for stock, have we not been too much like the horse in the cider mill, going the same round, *year after year*? Should we not accomplish more good, if we should leave the old track, and offer three premiums, first, second and third, for the best milch cow, without distinction of breed? Then offer premiums, for the best herd of cattle, not less than six in number. Also, others for not less than four cows and a bull. And still another premium for a herd of cattle, not less than seven in number, of the owner's raising.

In order to make this acceptable to the farmers, suppose we pay to all those who offer a herd, worthy of exhibition, whether successful competitors or not, and who live at a greater distance than five miles from the fair, a travelling fee of two cents per mile, for each one of the cattle offered, for every mile exceeding five from the place of the fair?

I think this would bring a better show of stock to our fair, than we ever yet have had. I make these suggestions, hoping they may meet the eye of the Trustees, before their meeting, that they may have time to think of it, and be ready to adopt, amend, or reject, as they may think best.

ASA G. SHELDON,

Wilmington, Nov. 25, 1861.

WOODEN THINGS.—If Connecticut is not careful, she will lose the palm for inventing and making "wooden things." A farmer in Canada recently lost a fine sow which had twelve sucking pigs, and not caring to lose the pigs, too, he set to work and formed a rough model of a sow in wood, being hollow in the centre, the abdomen being furnished with twelve teats, cleverly formed of rawhide. The interior of the model is kept filled with milk, and the whole of the young pigs suck from the teats of this singular looking wooden sow, and all are thriving well.

For the New England Farmer.

HINTS ON AGRICULTURE.

The rule of every farm, unless in extraordinary situations of fertility, is to expend on it two-thirds of whatever is grown; such a farm cannot be worn out, but, with decent management, is constantly growing better.

Countries which have the largest population, where agriculture is thoroughly practiced, grow more and more productive. Belgium is the most thickly settled country in Europe; it has been cultivated like a garden, for centuries, and its yearly produce is constantly increasing.

There is, doubtless, a limit to the possible production of a farm, but we doubt if it was ever reached; we think sixty bushels of wheat to an acre a great yield, and so it is, compared with our average harvests of ten or fifteen, but it is quite possible, by high culture, to raise one hundred bushels on an acre.

Drilling saves two-thirds of the seed alone, and often increases by one-third the crop; the saving of the seed alone, in one year on a good-sized farm, would pay for the machine.

In broadcast sowing some of the seed is buried too deeply; some lies upon the surface; here it is crowded together; there it is separated too widely. The drill places the seed where it is wanted; the proper depth for wheat is one to two inches.

The time will come when wheat drilled in rows will be cultivated as carefully as corn—with an immense increase in its productiveness.

Wherever land needs manuring, it pays to manure well. Suppose ten dollars' worth of manure on an acre of land gives you a crop worth thirty dollars, and twenty dollars' worth gives you a crop worth only forty dollars, you are still the gainer, and will be for years to come.

A tree planted over the grave of Roger Williams enveloped his skeleton with its roots so completely as to preserve the form of the bones. In some parts of Connecticut there are little family-burying grounds in the orchards, and the trees nearest the graves flourish with a remarkable fertility. We may have scruples about consuming or selling our ancestors in the form of apples and cider, but it is certain that every bone is worth its weight in gold, as a manure. A few bones at the roots of a fruit tree or grape vine will supply it for a dozen years with just the nutriment it requires. The best wheat fields in Europe are its old battle-fields. No man who has a farm or garden should ever sell bones or ashes. Straw is worth more for manure than it ever brings when sold in market.

Our farmers think they do very well to get ten dollars net profit from an acre of land, but it would be a poor acre of garden that did not pay a hundred, and we have orchards that pay a thousand. There are pear trees that have paid a hundred dollars a year for several successive years.

Every dollar of manure on a farm is better than five dollars in any bank, or stock, that we know of. It is a good stock that pays ten per cent. It must be a badly managed farm where a deposit of manure will not pay three hundred per cent.

We need model farms and agricultural schools; but where these important institutions are wanted it would not be a bad plan to spend a day or two with those eccentric but very benevolent people and admirable farmers, the Shakers.

In a Shaker community, you have the material below the general average; but made the most of in certain directions. Agriculture and domestic manufactures, carried out thoroughly, with the most important objects, temperance and frugality, will make them rich.

In England, farmers prefer to lease farms rather than buy them. They prefer to expend their capital in stock, manure and labor, rather than shut it up in the land. But the man who wants a home for his family and his posterity, must own the land he cultivates, and then every acre he drains, every tree he plants, every load of manure he plows into it, will add to its permanent riches.

At the creation, man's appointed work was the cultivation of the earth, and there are many whose talents are inferior in this respect. I think it will be so until all the other works are subordinate to this. Canals are dug, railroads are constructed, cities are builded, warehouses, manufactories and ships are all constructed for the sole purpose of benefiting the lords and cultivators of the soil. All the pursuits of civilization rest upon this one. Perfect independence is impossible, but the old-fashioned farmer, who is able to produce for himself all the real necessities, comes very near to it.

A bed of muck or marl on a farm is better than a gold mine, in a long run: when the gold is exhausted, that is the end of it; but the enriched farm will pour out crops for a century.

When a fruit tree has exhausted its fruit-forming material, it must stop bearing. Try a load of muck or ashes, bone dust, &c., dug in from six to twelve feet from the trunk, and you will be satisfied.

Every dead animal on a farm which is not eaten as food, should be stored with loam, rotten leaves, old plaster, powdered charcoal, leached ashes, or other absorbents, so as to make a compost of manure that will be worth, in the long run, more than it would have sold for when living.

The science of agriculture is to know how to convert the waste and apparently valueless matters around us into the richest and most important production of life. The business of the farmer is one of the greatest dignity. It is to assist the Almighty in His work of creation. It is to increase the beauty and fertility of the earth.

North Charleston, N. H.

H. B.

GREAT EXPEDITION.

Our readers will perceive by the new railroad schedules published to-day that, actuated by a public spirit which gives them fresh claim to the grateful consideration of the entire community, the several railroad companies on the seaboard line have united in adopting a rate of speed on their respective roads which actually reduces the time of travel between Washington and Boston within *twenty hours*! Thus, a person leaving Boston at 2 P. M., arrives at Washington at 9½ o'clock next morning. We have heard of an ancient personage who, in the fervor of faith, said he believed a certain dogma because it was impossible; but here is an achievement in transportation which we can scarcely believe, although it is proved to be possible. We remember hearing a gentleman of this city, many years ago, before the happy introduction of railways, relate how, on entering the hall of the Exchange Hotel, in Boston, one evening, and stat-

ing that he had left Washington *five days* before—travelling by stage and steamboat—he was listened to with some incredulity. Was it possible; only five days from Washington to Boston? What was the world coming to? And now—. Has any man ever tried seriously to estimate the debt of gratitude which the world owes to the public spirit that has blessed it with railroads? Not in comfort alone to the traveller, or even in their incalculable benefits to commerce, but in the saving of precious time. It is only those who are aged enough to have been trundled and jolted along three miles an hour, in the former old vehicles of travel, that can begin to appreciate the blessings of railroads.—*National Intelligencer*.

A TIGER KILLED BY BABOONS.

The following account of a tiger chase is extracted from the *North Lincoln Sphynx*, a regimental paper published at Graham's town, Cape of Good Hope. The writer, after alluding to his sporting experience of all kinds and in all quarters of the globe, declares that he never witnessed so novel or intensely interesting a chase as that about to be described:

"Not long ago I spent a few days at Fort Brown, a small military post on the banks of the Great Fish river, where my friend W. was stationed. One evening, as my friend and I were returning home after a somewhat fatiguing day's buck-shooting, we were startled by hearing the most extraordinary noises not far from us. It seemed as if all the demons in the infernal regions had been unchained, and were amusing themselves by trying to frighten us poor mortals by their horrid yelling. We stood in breathless expectation, not knowing what could possibly be the cause of this diabolical row, with all sorts of strange conjectures flashing across our minds.

Nearer and nearer the yelling and screaming approached, and presently the cause became visible to our astonished eyes. Some three or four hundred yards to our right, upon the brow of a small hill, a spotted leopard (commonly called in this country a tiger, though much smaller than the lord of the Indian jungles,) came in view, bounding along with all the energy of despair, while close behind him followed an enormous pack of baboons, from whose throats proceeded the demoniacal sounds that had a few seconds before so startled us. Our excitement in the chase, as you may suppose, was intense. On went the tiger, making for the river, the baboons following like avenging demons, and evidently gaining ground upon their exhausted foe, though their exultant yells seemed each moment to increase his terror and speed. They reached the stream, the tiger still in advance, and with a tremendous bound he cast himself into its muddy waters and made for the opposite bank. The next moment his pursuers, in admirable confusion, were struggling after him, and as the tiger, now fearfully exhausted, clambered on the land again, the largest and strongest of the baboons were close at his heels, though many of the pack, (the old, the very young and weakly,) were still struggling in the water.

In a few moments all had passed from our sight

behind the brow of the opposite bank; but their increased yelling, now stationary behind the hill, told us that the tiger had met his doom, and that their strong arms and jaws were tearing him limb from limb. As the evening was far advanced, and we were still some miles from home, we did not cross the river to be in at the death; but next morning, a few bones and scattered fragments of flesh and skin showed what had been the tiger's fate. On our return home we were told by some Dutch gentlemen that such hunts are not uncommon when a tiger is rash enough to attack the young baboons, which often happens. All these creatures for miles around assemble and pursue their enemy with relentless fury to his death. Sometimes the chase lasts for days; but it invariably closes with the destruction of the tiger—a striking instance that the idea of retributive justice is not confined to man alone."

For the New England Farmer.

IS FARMING PROFITABLE?

This question has been so often asked and answered, that perhaps your readers will turn away from this article in disgust. But I do not think the subject is yet exhausted. Other men than farmers are entitled to have an opinion respecting it. Any man of common intelligence, especially if he is acquainted with the general condition of farmers, and the details of farm life, may form as correct an opinion on the subject as the farmer himself. By the term "profit," perhaps, we are apt to refer too exclusively to pecuniary results. The great pursuit of man is said to be happiness. But is it wise to measure the amount of happiness by the amount of money which men acquire?

Do observation and experience prove that the farmer is necessarily or uniformly in proportion to the latter? Although a certain amount of wealth undoubtedly contributes to our happiness, yet other elements must be taken into the account. Health, longevity and independence, certainty, freedom from exhausting care and anxiety, and various other circumstances must be considered in estimating the profitability of any business. In the first place, I think it will not be doubted that farmers, as a body, enjoy a greater measure of health than any other class of men. They are stronger and more robust, and retain their strength and vigor to a greater age than other men. They live longer on an average than any other class of men, which proves not only that their course of life is conducive to health, but that their labor is of a less exhausting character. Labor in the open air is always more healthy than labor in the shop, the counting-room or the study. Many other men who live and labor in the open air, as the hunter and the sailor, are subject to greater vicissitudes, exposures and dangers than the farmer, which often exhaust their health and cut short their lives. The circumstances under which the farmer labors in the spring, the songs of the birds, the fragrance and beauty of the flowers, the vigorous growth of the spring crops, and in the summer and autumn, the consciousness that he is reaping the reward of his labor, all tend to promote cheerfulness, hope and satisfaction.

The farmer's life is more uniform than that of most other men, and when the labors of the day

are ended, he sleeps quietly in his bed, secure from danger and the inclemencies of the weather. He is not subject, like the traveller and the sailor, to changes of climate and temperature. He is accustomed to the climate in which he lives. His diet is plain and substantial. It is rare that he is required to make unusual efforts, or, like the soldier on the march or in battle, to make extraordinary drafts upon his strength and powers of endurance. Hence, as might be expected, statistics show that the farmer lives to a greater age than most other men.

Farming is safer than any other business. The navigator, the fisherman, the trader pay large sums for insurance. Indeed, so great are their risks that they cannot afford to carry on their business without insurance. But the farmer can afford to be his own underwriter. With reasonable skill and diligence, he is sure of the ordinary results of his business. It has been stated, on good authority, that ninety out of a hundred who engage in trade in our cities fail in their business. On the other hand, observing farmers have estimated that not more than five per cent. of those engaged in farming ever fail. Many of our young men enter upon the business of farming heavily in debt. If they take the homestead, they have to pay legacies to their brothers and sisters. If they purchase a farm, they pay a part, and take the balance on credit. Yet in most cases they work out of debt, and in a few years own their farms free of incumbrance. Is not here sufficient proof of the safety and certainty of the business of farming?

I am acquainted with a farmer less than forty years old, who is very apt to complain of the unprofitableness of farming. Now let us look at the facts in his case.

He inherited less than \$2000, and married a wife who had about \$2000. He purchased a farm for \$2000. Built a house which cost, say \$1800. Built a barn which cost as much more. Here was an outlay of \$5,600. He has now his house well furnished, 16 cows worth \$25 each, a yoke of oxen worth \$100, two horses worth \$100, a carriage worth \$100, a good stock of wagons, carts and other farm implements, worth say \$300—making his farm stock worth \$1000. He has dug ditches, laid walls, reclaimed swamp lands, and in various ways improved his farm, until it is now worth, say \$8000. He has paid his debts and is now free from incumbrance. Here is a man who has doubled the value of his property, has an excellent wife and four promising children—has maintained himself and his family well—has a permanent business, knows the capabilities of his farm, and is annually increasing his products. He has become skilful in his business, has good health, and the respect and confidence of his neighbors, and he is not yet forty years old! Has not this man's business been profitable? And when he compares the results he has achieved with those achieved by men in other vocations around him, has he any reason to grumble at his want of success?

The farmer is more independent of fashion than others. He can live and dress as he pleases, while the minister, the doctor, the lawyer and the merchant must dress and live in a more expensive manner, or they will at once lose caste in the community. They must expend more money in visiting and receiving company, in travelling, in sus-

taining societies, lectures and other institutions of the day, in books, furniture and in various other ways, in obedience to the demands of custom.

Let us compare the results of farming with the results of other vocations in our own community. Our town has been settled more than two hundred years; upon inquiry, I can hear of but one physician who became wealthy by his profession during that period, and yet we have had many men of learning and talents who have worked thirty or forty years harder than any farmer among us—have been more exposed by day and night to the inclemency of the weather—have lost more sleep and undergone more anxiety. We have now an intelligent physician who has labored more than forty years most indefatigably among us. His labors have been most abundant by day and night, in season and out of season—and he has the confidence of the community to as great a degree as any man in the State.

Has his business been more profitable to him, in a pecuniary view, than that of many of our farmers? How is it with physicians of our acquaintance in other towns? Have they grown rich by their profession? How is it in our cities? A few, eminent by talent, or peculiarly favored by fortune, have grown wealthy by their professional labors. But not more than one in ten does more than gain a comfortable livelihood. We must judge, not by exceptional cases but by average results. Who ever heard of a New England clergyman becoming rich by his salary? In former times, when clergymen were settled for life, many of them owned small farms, and labored with their hands to eke out their salaries. As these farms were generally situated in villages, some of them realized profit from the increased value of their lands. Some have married wealth. But I have yet to hear of a clergyman who has grown even moderately wealthy, by his profession alone.

A few men of superior talents do most of the legal business. Some of these grow rich by their professional business alone. But is it so with the majority of our lawyers? Are not most of them eager to engage in extra professional business? They become agents of corporations. They seek public offices. They engage in speculations. Some of them even become farmers. Probably not more than ten per cent. of them become wealthy by their profession. Most mechanics work early and late. They generally obtain a comfortable living. Some accumulate property by extraordinary skill or diligence, but I think they do not in general exceed farmers in this respect.

The manufacturer sometimes acquires wealth for a time with great rapidity. But lo! there comes a change. The kind of goods which he is making goes out of fashion; the raw material rises in value. Some new machine is invented which will produce the same goods at a much cheaper rate, and in order to sustain himself, he must have an entire new set of machinery. The tariff is changed, and foreign goods undersell him. If he did not make money rapidly between the crises that so frequently occur, he could not carry on his business at all. When business is good, he must put on all his force, and drive day and night. Now think of the care and anxiety to which he is subject. And the operatives—how often are they thrown out of work, and left in an anxious and starving condition? What farmer who owns his

hundred acres, with comfortable buildings and a decent stock of cattle, would exchange situations with the employer or employed in manufacturing life?

Farming, then, tends to promote health and longevity. It is a safe and certain business when compared with any other vocation, and its pecuniary results compare favorably with the results of and other business. All these elements should be taken into estimation in making up the profit and loss account. Should not the farmer, then, be contented with his lot?

J. R.

Concord, Dec. 17, 1861.

For the New England Farmer.

SALTING AND PRESERVING HAMS AND BEEF.

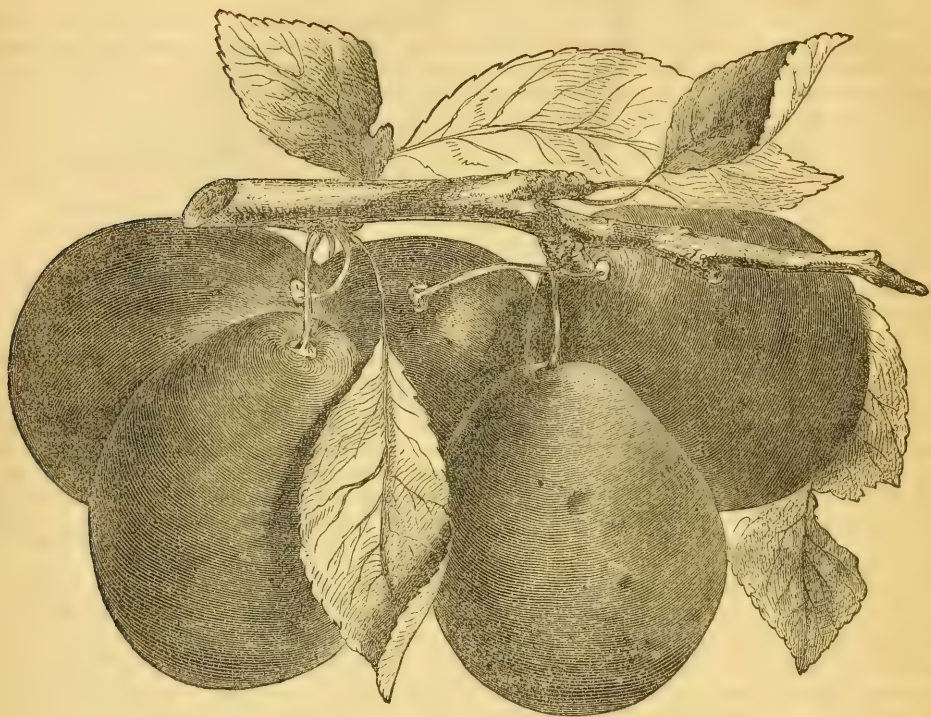
I notice an article in the *N. E. Farmer* of the 14th, from the *Ohio Farmer*, on the subject of "Curing hams and sides." It appears to me that hams covered with salt, and in a strong pickle three to five weeks, would be too salt to make good bacon—it would not suit my taste. I have followed one method more than thirty years, and have never failed to have a good article. I prepare a pickle by dissolving in boiling water as much salt as will dissolve, and skim off whatever rises on the top. This purified, strong pickle, I reduce by adding an equal quantity of pure water. In this reduced pickle of half full strength, when cold, I put my hams, and keep them covered in it till it is convenient to smoke them—five or ten weeks will not hurt them. I never use any saltpetre. I have sometimes put in a little saleratus to correct any acid there may be in pork or pickle, and I think it makes the bacon tender. I use corn cobs to smoke it. Sometimes when I wanted to give more flavor to bacon, I have prepared a liquor with brown sugar in it, and such spices as I wished—pounded cloves, spice, pepper, (cayenne,) &c., and after taking the hams from the pickle and draining them, kept them basted in this liquor a week or two before smoking.

I also put down my beef in a similar pickle. I put my beef into a barrel, and then prepare the pickle as for bacon, but pour it on the beef boiling hot. It will keep well till April or May, and then it should be repacked in stronger pickle. I keep the barrel in a cold room above ground. It will be good corned beef till the middle of April, or longer, and as salt as I want to have beef. Saltpetre would give it color and make it harder, but beef is always hard enough for me, and I have an impression that saltpetre does not add to its healthfulness. Some saleratus would not hurt it, but make it tender. I have preserved my beef in this way for at least thirty years, and have never had any injured for want of salt. All who have eaten our beef and bacon call it first rate. Some would prefer to have it a little salter, perhaps—not much.

RUFUS MCINTIRE.

Parsonsfield, Me., Dec., 1861.

REMARKS.—From our own experience in preserving meats, we believe the process stated by Mr. McIntire is an excellent one—and one that will secure juicy, sweet and tender meat in all cases where the meat itself is good.



VANDINE'S SEEDLING PLUM.

Downing says "that the soil and climate of the Middle States are admirably suited to this fruit is sufficiently proved by the almost spontaneous production of such varieties as the Washington, Jefferson, Lawrence's Favorite, &c.; sorts which equal or surpass in beauty or flavor the most celebrated plums of France or England." For several years past the cultivator of the plum has been discouraged by the destruction occasioned by the curculio, and what is still worse, the black knot, caused either by this insect or by some widely-spread disease among the trees. No sufficient remedy has yet been found for either of these pests. The ravages of the curculio may be prevented by a frequent jarring off of the insects upon cloths and killing them, but the labor must be a protracted and tedious one. The plum, however, is a delicious dessert fruit, is excellent for sauces and preserves, and is worthy of considerable effort to bring it to perfection.

The cluster of plums which is so beautifully figured above, was presented to us by Mr. HENRY VANDINE, of Cambridgeport, Mass., and had a flavor as excellent as the cluster was beautiful. A

few days since he sent us the following note in relation to it:

Cambridgeport, Dec. 20, 1861.

MESSRS. NOURSE, EATON & TOLMAN:—Dear Sirs,—I have received your letter requesting a description of the Vandine Seedling Plum. It originated on my place several years ago. It is about the size of the Diamond Plum, of a black color, with a heavy blue bloom. It ripens about the last of August, and is of an excellent quality when fully ripe.

Yours, respectfully,

HENRY VANDINE.

RATS AFRAID OF POWDER.—H. H. Ballard, Owen Co., Ky., writes to the *American Agriculturist* that with one-quarter of a pound of gunpowder he can keep every rat from his premises for a year. "The powder is not used to drive a bullet or shot through the animal, but is simply burned in small quantities, say a teaspoonful in a place, along their usual paths, and at the holes where they come out, with the proper precaution to prevent accidents from fire." He says he has proved its efficacy by repeated trials. The rat has a keen sense of smell, and if he has sense enough to know that he is not wanted, when he perceives the odor of the burnt powder, the remedy will be of great value.

For the New England Farmer.

THE WAR AND THE FARMER.

BY JUDGE FRENCH.

We have now, in the ranks of our army, fighting for the Constitution and laws of the best government and most prosperous people upon which the sun ever shone, more than half a million of men, all volunteers, nearly all men who, a few months ago, were engaged in the peaceful avocations of productive industry, either in the workshop or on the farm. A half-million of industrious men, suddenly called from laboring to produce food and clothing, into a profession which produces not an ear of corn nor a yard of cloth! More than this, even! for another large army of men, with horses and machinery of all kinds, are away from their accustomed pursuits, devoting their labor to constructing fortifications, to building ships of war, to manufacturing guns, and swords, and all warlike implements. All these men are consuming the necessities of life, and producing nothing, and worse than this, because what they consume is charged with the cost of freight away from the place of production, and of necessity, a considerable proportion is lost or wastefully consumed. Looking at these facts, which lie upon the very surface, many are inquiring anxiously as to the future. How can the loyal States spare so many industrious men, and who is to perform their accustomed labor at home?

No philosopher or statesman ever yet succeeded in adjusting these questions relating to supply and demand, especially if the matter of tariffs and free trade were involved, so that his theories and facts would correspond, and we shall not attempt what wiser men have failed to accomplish. Yet there are some facts and considerations worthy our attention, in connection with the question whether we can spare so much labor without suffering, and even famine?

This is generally thought to be rather a hard world to live in, and we in New England being duly impressed with the Scripture idea that labor and bread are pretty closely allied, have most of us an impression that it is everybody's duty to work all the time, to keep the world revolving. Now, this is a great mistake; we are laboring, many of us, for that which is not bread, in any sense, and it is by no means necessary for all the world to work, that all the world should be comfortably provided for. We know it is not, if we look Southward, where we see every negro, great and small, supporting himself, and a white man or two besides! and everybody knows that one Northern farmer does more effective work than three slaves. Read what Dr. Paley says of the real necessity for labor in England, and it will be seen that an industrious people can spare for war,

or any other extraordinary occasion, a far larger proportion of its active laborers than we have yet sent away. It should be borne in mind, that only about one-tenth the population of England is engaged in agriculture, the great majority being engaged in manufactures.

"Perhaps," says he, "two-thirds of the manufacturers in England are employed upon articles of confessed luxury, ornament or splendor, in the superfluous embellishment of some articles which are useful in their kind, or upon others which have no conceivable use or value, but what is founded in caprice or fashion."

Now it is obvious, that England would be none the poorer, if it should, for five years, dispense with all those articles of luxury, and support the two-thirds of her manufacturers, who are fit for soldiers, in her armies. They might as well be soldiers, as to weave laces or ribbons. It would cost the nation no more to support such weavers, with guns on their shoulders, than at their looms, if those who formerly bought the laces and ribbons, would go without them, and pay the same amount towards the war.

In America, a far less proportion of labor is devoted to luxuries, than in England, but still it is true that we can spare a very large force for the war, and yet have enough to provide food and clothing, and all other comforts of life for us all. We can all economize as individuals, and so spare something for the soldiers. The imports of dry goods into the city of New York alone, are fifty-five millions less up to December of this year, than in the same time last year. A great part of this saving is by dispensing with mere articles of fancy, by the women of the country. What harm comes to anybody if the ladies who formerly did nothing in their leisure hours, or worked worsted, which is the next thing to it, now knit a half-million pairs of socks and mittens? Is not so much useful labor created by the war?

We have in fact had a surplus of labor on our farms, as a whole, for some years past. More Indian corn has been raised in many parts of the West, than could be properly or profitably used. So abundant and cheap has it been in some localities, that it has been burned for fuel, which is a public loss, for the fresh productive soil has been thus needlessly sapped in its production. And now, with no extraordinary crop the past season, we have enough for ourselves, with our vast armies, enough to supply the demands of France and England, and, thank God, something to give to starving Ireland when she wants help again, as she probably will, the coming winter.

We have it stated on the authority of Pashley, that there were in England, in 1850, 300,000 able bodied male paupers! and that the amount levied for poor rates in that country, was about \$36,000,-

000 in the same year. Yet England is a great and prosperous nation. We have no able bodied male paupers, but are we not vastly more able, for that very reason, to send an army into the field, and to maintain it there? Less than 50,000 persons in England are classed as landed proprietors, while here, except in cities, everybody owns land.

This diffusion of property is the secret of the ability of every one to take care of himself. The famine of 1846 and 1847, in Ireland, was the result of the poverty of the people, rather than the scarcity of food. There was abundance of food in Great Britain, and ship-loads ready to go to her ports, but the people had no means wherewith to buy food, and so they perished by actual starvation, while the granaries of capitalists and wealthy land-holders were filled to overflowing. Before a sheaf of wheat was cut, in 1847, flour and meal became a drug in the English market, and many dealers were ruined by the sudden reduction in prices. We have no means of knowing the surplus of our crops this year, but as yet, they give no signs of exhaustion. A few cents advance in price will enable those who have lost or wastefully consumed their wheat and corn, to bring it into market. The increased demand will open new facilities for transportation, and stimulate those who remain at home to increased exertion. Labor will be directed more exclusively to the production of articles of necessity, and patriotism and self-interest will both call upon all to sacrifice something at least of our usual luxuries at home, for the comfort of our brave sons and brothers, who are so nobly maintaining our rights in the field.

We have no cause for discouragement. Republicanism, with her equal distribution of land and of privileges, is exhibiting a sublime spectacle before the world to-day, such as kings and potentates have never before beheld, and will never see in their own kingdoms—an army of more than 500,000 freemen volunteering to fight for their country, with abundance at home, supplying the markets of the world with bread, while its Congress in the first week of its session is considering the expediency of sending relief to the homes of the brave Irishmen who have rallied so readily to the standard of their adopted country.

CHEMICAL EXPERIMENTS WITH THE WHEAT CROP.—From some recent and careful experiments with wheat, on English soil, a British chemist asserts that, reckoning the soil to be one foot deep, it would require, of ordinary rotation with home manuring and selling only corn and meat, about one thousand years to exhaust as much phosphoric acid, about two thousand years to exhaust as much potash, and about six thousand years to exhaust as much silica, as, according to the average results of forty-two analyses relating to fourteen soils of very various descriptions had been found to be soluble in dilute hydrochloric acid.

For the New England Farmer.

THE PATRIOTIC FARMER'S MUSINGS.

BY D. W. L.

Farmer Stubbs in his furrow trod pensive along,
While the hills were all echoing melodious song;
Uncle Sam had just bargained for Tim and for Dave,
And given them muskets the Union to save.

"Get along, Buck and Bright," and he hit them a slap,
"Out of this, boys, now, forward, kedap!"

"King Cotton, the tyrant, with lash in his hand,
May rule his slave minions of half-heathen land;
But men of New England—they born of the rocks—
Will square off and give him a few solid knocks.

Now, stir up, my Buckeyes, you're taking your nap;
Away with the old plow, but steady, kedap.

"The Union's a bargain for better or worse,
But broken at will, a political curse;
The voice of her people must questions decide,
And ever remain the Republican's pride.
So move along, Buckeyes—'twill be no mishap;
And both pull together, now—steady, kedap.

"There's honest Abe Lincoln, a man for the times,
Who fences off slavery in well-defined lines,
And holds up our flag with a firm, steady hand,
Resolved it shall wave o'er a united land.

Bear away, now, my darlings, or I'll hit you a tap;
Haw Bright' and White-Face, come around here, kedap.

"But men of the South, do not boast of your strength,
For the cause of mankind can but triumph at length;
And know ye, proud rebels, whose cause is so black,
With their hands to the plow, Yankees never look back.
So push along, Buckeyes, or you'll get a slap;
Don't play the secesh, now, but forward, kedap.

"And men of the North, from the field and the shop,
Whose young blood is pledged to the very last drop,
Let all the world know, in a quarrel so just,
You'll crush out rebellion or sink into dust.
Then root out the stubble, and make the plow snap—
A Yankee's behind ye, old sojers, kedap."

West Medford, Dec., 1861.

For the New England Farmer.

CORRESPONDENCE FROM MAINE.

First Snow—Sheep Manure—Sheep for Mutton and Wool—Profits of Sheep—Matching Steers.

SNOW fell so as to make quite good sleighing, November 24, throughout the northern part of the State. The ground was frozen but little in any place, and the frost has mostly come out since it has been so mild; had it not snowed repeatedly since, the ground would have been bare again. This has given sheep a longer grazing fall than we are always sure of, which is quite an item in the fodder designed for them.

SHEEP MANIA.—This year brings round another cycle of this disease, and the cry is sheep! sheep! have you any sheep to sell, or lambs to let? Since wool advanced in prices, nearly every one wants more sheep to keep, and are eager for them at much higher prices than for years previous. Store sheep and lambs are quick at two and one-half to three cents per pound, live weight, which is a high figure with us. Speculators are letting sheep for one pound and a half of wool, per head, and the taker bears all the risk, and pays the taxes—so I have been informed.

It is very generally calculated here that sheep pay the best of any stock for their keeping, upon the amount invested, and the necessary labor re-

quired. Many of the improved breeds are being introduced; some sections taking those best for wool, and others those for mutton, but generally, they are crossed upon those which have been here long enough to be called natives; often, first fine wool and then coarse wool, very much as is most convenient, with the mass of sheep-keepers; nearly every farmer keeping a few sheep, and thinking it will not pay to be to so much expense as to get rams of their choice.

MATCHING STEERS.—The farmers have manifested quite a laudable spirit of improvement over any previous year, in matching up their steers when intending to keep them; and, often it has been found a good investment to pay the fair difference when designed for sale. Matched one, two, three or four year old steers are in greater demand than the market can supply; and this demand is yearly increasing. This seems as it should be, because it costs but a trifle more to raise them, than it does those illy mated, while they command a more remunerative price, which is often all that there is in the way of profit. Mate up the steers.

Elm Tree Farm, Dec., 1861. O. W. TRUE.

For the New England Farmer.

TESTIMONY IN FAVOR OF FARMING.

Opinions of an Aged Farmer—Stick to the Homestead—Work with One's Own Hands—Cattle Report in N. E. Farmer—Receipt for making Brown Bread.

MR. EDITOR:—I have passed the period allotted to man's existence in the present life, but my interest in the success of agriculture increases with my years, and I wish to leave my dying testimony of its worth. Should these lines meet the eye of any young man who is struggling under difficulties upon the paternal inheritance, I would exhort him to stay and overcome all obstacles that patience and perseverance can surmount, and, my experience for it, in his maturer years, he will look back with pleasure upon his past life, and peace and plenty shall crown his declining years.

I would recommend to all who wish to have the full enjoyment of agricultural life, to labor some with their own hands. There are but few who cannot obtain some land to work upon, if they wish.

One word in recommendation of the *New England Farmer*. There has been much said and written about agricultural colleges, but I think the *Farmer* is one already established, and endowed with some of the best professors that this country and Europe afford, to which all may have access at a trifling expense. *The report of the Cattle Market for the past few weeks, is worth the whole price of the paper to all those who have any dealings in stock.*

I think my housekeeper makes the best brown bread I have ever tasted; the following is a receipt for making it. To six tea-cupfuls of Indian, and three of rye meal, one table-spoon level full of bread soda, one tea-cupful of molasses, and sour milk sufficient to wet it to the same consistence as brown bread, where the Indian is scalded. A loaf of this size would require a dish which would hold three quarts. Cover the dish and place it on an iron ring in a large iron pot, and cook by steaming four hours, and then bake fifteen or twenty minutes. If steamed a longer time, it is rather improved.

THOMAS HASKELL.

West Gloucester, Dec. 14, 1861.

CULTURE OF THE GRAPE.

We have before us the December number of *Hovey's Magazine*, and among other good articles, we find a leading one, by the editor, upon the "Culture of the Grape." After speaking of the late favorable season, and of the merits of several varieties, he says:

Having thus given our estimate of the several varieties which have been introduced somewhat generally, as they have appeared, more particularly the present year, we proceed to inquire into the causes which have produced this favorable result, deducing therefrom a lesson which may aid us in the more successful culture of the grape.

If we follow the course of the weather for the summer, we shall find it has been dry, warm, and very free from long or continued dull or even damp weather, and beyond the remembrance of cultivators extended further into the autumn—the first frost having occurred late in October. Hence the well grown grapes had time to fully mature, aided as they were by continuous sunshine. How shall we then avoid failure in ordinary years, when we can hardly expect such as the present one to occur often?

First, then, we can to some extent imitate its dryness, by planting only in light, sandy, thoroughly drained soil, avoiding by all means a hard, damp, stiff loam, as sure to keep up a late growth, so that winter finds the wood immature, and the dormant fruit buds unable to resist the effects of cold if unprotected, and liable to danger when covered with earth. In France the vineyards always cover the hillsides or elevated grounds,—rarely the valleys or plains,—for the obvious reasons that the roots are kept dry, the late growth checked, and the wood fully matured.

It will be inferred from this that nothing could be more injurious in grape culture than to make the soil too deep and rich; rich it may be upon the surface, but not too deep, and always with a dry bottom. The summer and autumn rains will then leave the surface readily, the soil will be immediately warmed by the sun and air, and mildew, so fatal to the vines, will be prevented, or at least, greatly mitigated. Indeed, good sound judgment will dictate that cautionary measures of this kind should be taken wherever the grape is to be extensively and successfully grown.

Secondly; though we have not the power to bring sunshine to the vines, we can, by favorableness of locality, prevent the ill effects which often ensue from long continued wet weather. Near the seacoast, where the easterly storms prevail, an aspect, sheltered in that direction should be chosen, say one facing the south or west, or if in the open garden, near the shelter of evergreen trees or hedges. The direct action of a cold, easterly storm is far different from the sifted atmosphere of a fence or hedge. Hence the greater certainty of a crop when the vines are trained to the south side of a house, where they are sheltered from the chilly blasts and pelting rains of our easterly storms.

Thirdly; pruning, judiciously performed, is a material aid in successful grape culture. The summer growth should not be so crowded as to prevent the free admission of light and air, nor so open as to expose the fruit to alternate sun and

rain. A moderate number of strong, healthy branches, with vigorous foliage, is better than a quantity of weak shoots, covered with half grown leaves. The aim should be to avoid both extremes, and secure long, well ripened canes, with thoroughly matured buds. A strong vine will resist mildew, when a weaker one would give way under the attack.

Lastly, winter protection is an important consideration. Until we secure perfectly hardy vines, they cannot be considered safe in our variable seasons. If the wood does not suffer, the dormant fruit buds are affected. They do not start kindly and vigorously, and a week, often a fortnight, is lost by their weakened energies from severe cold; and though the summer's growth may be vigorous enough, the fruit still lags behind. It is a thing which did not occur to us till close observation made it apparent. In a more favorable climate, like that of southern New York and Ohio, a week or ten days is of no great importance; but in New England, with frosty nights the last of September, a week gained is often the securing of an abundant crop.

HOW TO RAISE HOGS.

A. G. Mullins, of Kentucky, in a communication to the *Genesee Farmer*, offers the following hints on the raising of hogs:

Say we have a good stock to begin with—a stock that matures early and fattens well. The pigs should come from the middle of March to May. There is a great advantage in pigs coming at this time, as we can graze them through two summers, and have them to keep only through one winter. They come to be of fine size by the second fall or winter. Hogs may be pushed into market younger, but at more expense in grain, and they will be smaller at fattening time, which is a great disadvantage.

The greatest profit in hogs is in grazing them, and turning them upon grain fields, where they can gather for themselves; and having them large and in good condition at fattening time. The sows and pigs should be kept in good growing condition by feeding them on Indian corn, or corn meal made into slop. As soon as the clover begins to blossom, or a little before, turn them upon it. Sows and pigs should still be given some grain while in the clover.

WASHINGTON A YANKEE CITY.—Washington is essentially a Yankee city at the present time. In every department business is thriving to a degree unparalleled in its history. Real estate has advanced to unexpected figures, and it is a matter of impossibility to find suitable accommodations for the vast influx of business now pouring in upon us. Enterprise is now the watchword, where a short year ago inactivity and decay prevailed. Vigorous competition has reduced the price of many of the necessities of life. Old monopolies have been scattered to the winds, and the consumer is generally benefited by the change. The Washington of to-day is totally different from the Washington of 1860. Many are unacquainted with the cause of the transformation, and look with wondering eyes at what is only a legitimate consequence.—*Washington Republican*.

EXTRACTS AND REPLIES.

A GOOD KIND OF CORN.

In the monthly *Farmer* for June last, is an account of an excellent crop of corn, by C. L. FRENCH, 2d, of Bedford, N. H. In connection with this account he spoke in such high terms of a variety of corn planted by him for the last 30 years, that I was induced to make further inquiries concerning it. Learning that several farmers of West Brookfield had planted corn the past season, and received in answer a letter from Mr. A. Keep, dated Sept. 26, from which I send you some extracts for the benefit of others, who, like myself, may be anxious to obtain a variety, both *early* and *prolific*.

He says: "In relation to the corn I procured from N. H., I can say that I planted May 29, on sandy loam, manure wholly spread, and the corn was well out of the way of an ordinary frost about the 5th of this month, the husks on some of the ears having turned white and started from the ear. It is certainly early enough. One of my neighbors planted it on a rather heavy soil on the 1st day of June, and exhibited a lot of it at our Cattle Show on the 20th inst.; the ears very large and well ripened, and his crop is very heavy.

"I gave my brother, who lives in Paxton, seed enough for perhaps 100 hills, and I saw it a few days ago; I think I never saw heavier corn anywhere. It is on *very high* land, where it is oftener the corn crop fails them otherwise, but there will be no failure in this small lot.

"I might say that most of the large ears in my field are, and have been many days, open; the husks have started and the corn ripe enough to grind."

I send the above for publication, not from any personal motive, as I never saw Mr. French or Mr. Keep, but because I believe that many farmers would be glad to know where they can obtain a variety answering the above description.

Royalston, Dec. 13, 1861.

J. WOOD.

PREMIUMS FOR HERDS.

Friend SHELDON's notion of offering premiums for herds of best improved animals, instead of single animals, is worthy of much regard. I have often known an old cow that had been strained to her utmost capacity in the production of milk, upon a statement being made that she had averaged to give from thirty-five to forty-five pounds of milk per day, for many months, to be awarded the first premium at our shows; and this with little or no regard to the quality of the milk.

It is a law of Nature that whatever is greatly extended in one direction, will come short in another. Give me the snug built, little animal, with bright eye, and milk of superior quality, in preference to any of these overgrown monsters.

I do not perceive the propriety of Mr. S.'s recommendation to do away the distinction of breeds. I had supposed these distinctions to be well defined, and very convenient for reference. I know there are some who say there is no such thing as *Native breed of cattle*—let it be so, if you please, so long as those bred and born on our hills will ever have the preference of many whose judgment is worthy of regard.

ESSEX.

December 16, 1861.

YIELD OF MILK.

Having been a subscriber to the *N. E. Farmer* for years, I have often seen statements from persons, of the quantity of milk given by cows in stated periods. I annex a statement of the quantity from one cow that I have milked for one year, from Nov. 21, 1860 to Nov. 21, 1861. We used in my family what milk we wanted, and sold the balance at a store in the neighborhood, at 5 cents per quart. You will see she gave 4,967 quarts in one year, being about an average of 13 6-10 quarts daily.

She calved Nov. 15, 1860; commenced milking her Nov. 21, 1860.

10 days in November sold at store.....	87 quarts.
December " "	306 "
January " "	348 "
February " "	308.2 "
March " "	338.2 "
April " "	369 "
May " "	351 "
June " "	354 "
July " "	379.2 "
August " "	354 "
September " "	302.2 "
October " "	210 "
21 days in November " "	110 "
Used in family.....	1146 "

4967 quarts.
5 cents.

\$248.35

HENRY R. CONGDON.

Providence, R. I. Dec., 1861.

REMARKS.—Here is a product worthy of imitation.

TO PREVENT LEATHER FROM SOAKING WATER.

As the season has come when farmers are apt to have wet feet, unless they constantly wear rubber boots,—a practice which can hardly be condemned in too strong terms—I give you below a method for treating leather boots and shoes, which I know, from wearing them so treated, to be first-rate for keeping the feet dry and making the boots or shoes wear much longer than they would otherwise. It is as follows:

Melt together in a pot over a fire, a pound of tallow, a quarter of a pound of rosin, and an ounce of beeswax, to which add a teaspoonful of lamp black; when melted and mixed, warm the boots or shoes, and apply the hot stuff with a painter's brush, until neither the sole nor upper leathers will take in any more. The only caution to be observed is, not to apply the mixture so hot as to burn the leather.

J. C. G.

Boscawen, N. H., Dec., 1861.

WOOL SALES—FINE WOOL.

Our sales, since April last, from 175 sheep, of the same blood, have amounted to two thousand dollars, without diminishing our numbers, while at the same time we have improved the value of the flock by reserving the best. Were I accustomed to writing for the press, I think I could say some things that would be a benefit to some of my brother farmers, and I may possibly attempt it some of these days.

NATHAN BOTTUM.

Shaftsbury, Vt., Dec., 1861.

REMARKS.—With the above note we had a sample of the wool alluded to, which is very beautiful. The thistle's down could scarcely be softer. We

hope our correspondent will regard the promptings of his mind, and write for the *Farmer*. Our readers want the facts of practical men.

AN EARLIER ONION WANTED.

Our farmers very generally tried the flat onion seed, sometimes called the Rhode Island onion, to a greater or less extent, the past season. The result was not at all satisfactory; the yield being generally mixed to a considerable degree with the red onion, and the crop, *without an exception*, ripening later than our standard, the Danvers Yellow. Some of the seed planted came directly from Rhode Island,—a portion was raised in the State. Can any of your readers inform us where we can obtain flat onion seed that is *as early* as the Danvers Yellow?

J. J. H. GREGORY.

Marblehead, Mass., Dec., 1861.

GOV. HOLBROOK AND AGRICULTURE.

I notice in the last *Farmer* an article from the *Providence Journal* which speaks of Gov. HOLBROOK's improvements in agricultural implements, and his numerous articles on practical farming, from which I think I have received considerable benefit.

I constructed my cow stables in 1860 according to Gov. Holbrook's plan, published in the *Farmer* at that time, with a trench in the rear of the cows to put muck and other absorbents in to save the liquid manure, and I do not hesitate to say the improvement has saved me enough to pay for the *Farmer* several years.

DAN RICHARDSON.

Westfield, Vt., Dec., 1861.

STODDARD'S SELF-OPERATING HORSE RAKE AND COCKER.

Can you inform me where the horse rake, noticed in the November number of the monthly *Farmer*, is manufactured, and by whom?

A SUBSCRIBER.

Stratham, N. H., Dec., 1861.

REMARKS.—The above rake was invented, and is manufactured, by Mr. J. C. STODDARD, of Worcester, Mass., and is well worth your attention, if you intend to have raking to do next summer.

For the New England Farmer.

LASTING EFFECT OF MUCK ON CROPS.

MR. EDITOR:—Right in front of my house there is a fifteen acre lot of sandy land. Forty-four years ago, a portion of this lot was treated to a heavy dressing of meadow mud. On this portion of the lot the crops have been from one-quarter to one-third greater than on the other part of the lot, although it has all been treated alike ever since. All my neighbors, for miles around, have noticed the difference in the growth of the crops on this lot, and I have explained to them the cause, and invited them to go into their swamps and draw out muck and make a compost, or spread it on their land in the fall and plow it in in the spring, in the same manner that a part of this lot was treated, and they would have no cause to go to the city for manure and cart it from six to ten miles. But from all that I have shown and said to them, I

have only persuaded two to try the experiment, as they call it. One of them has drawn from the swamp between five and six hundred ox-cart loads this fall, and the other has tried it on a gravelly piece of land and by it he has doubled the fertility of the land.

I have been digging up a piece of low swamp land and carted on a coat of sand from the high land that lays along the border, which I intend to plant in the spring to different kinds of garden vegetables on part, and slow grass on another part. As the strawberry wants considerable moisture, how would they do in such a locality? The soil is from four to twelve feet deep, and it is drained eighteen inches below the surface. I intended it for cranberries, but I find the cranberry culture has taken a new turn; that is, instead of setting the vines in low swamps, people are taking the top soil off of their poorest high land, and setting them in the subsoil. They say they bear as well as they do in low land, are not quite so large, but firmer, and not so liable to be damaged by frost.

E. LEONARD.

New Bedford, 12th Mo., 1861.

REMARKS.—Strawberries would probably flourish well on the land you described.

AGES OF THE STATES OF AMERICA.

The following chronological table may be interesting to our readers at the present crisis:

SETTLEMENTS.

- 1607—Virginia, by the English.
- 1613—New York, by the Dutch.
- 1620—Massachusetts, by the Puritans.
- 1624—New Jersey, by the Dutch.
- 1628—Delaware, by the Swedes and Fins.
- 1635—Maryland, by the Irish Catholics.
- 1636—Rhode Island, by Roger Williams.
- 1639—North Carolina, by the English.
- 1670—South Carolina, by the English.
- 1682—Pennsylvania, by William Penn.
- 1732—Georgia, by Oglethorp.

ADMITTED INTO THE UNION.

- | | |
|-------------------|------------------|
| 1792—Vermont. | 1836—Michigan. |
| 1792—Kentucky. | 1836—Arkansas. |
| 1796—Tennessee. | 1845—Florida. |
| 1802—Ohio. | 1845—Texas. |
| 1811—Louisiana. | 1846—Iowa. |
| 1816—Indiana. | 1848—Wisconsin. |
| 1816—Mississippi. | 1850—California. |
| 1818—Illinois. | 1858—Minnesota. |
| 1819—Alabama. | 1858—Oregon. |
| 1820—Maine. | 1861—Kansas. |
| 1821—Missouri. | |

OUR NEW DRESS.—The reader will, we hope, notice the bright and beautiful dress in which the *Farmer* appears, this month,—the older eyes will, we are quite sure. We cannot *spread* our dress as some fair creatures do, but can present it to the reader with a clean *face* and correct *form*, so that it will be grateful to the eye and clear to the understanding. The publishers will spare no pains to make the *Farmer* valuable in every respect.

For the New England Farmer.

SCRAPS FROM MY DIARY.

The Weather—Application of Fertilizers—Fruit Trees in New England—Placed Here to Learn, as Well as to Earn—Borers—Ashes Around Fruit Trees—Market Reports.

As the winter thus far has been very open, farmers have improved the time in various ways. I see some drawing manure to their meadows, and others into their young orchards, around the trees. It is very amusing to me to see how the great majority of farmers apply fertilizers to their fruit trees. I should as soon apply an Indian meal poultice to a pig's ears to fatten him.

Most of the fruit trees in New England are on grass land. Farmers want to get too many kinds of crops from the same land to ever get any good ones; therefore the more surface is fertilized, the less grass they will get; so they dig in their fertilizers from the body of their trees each way, enriching about one-fourth part of the surface under the tree, and the smallest fourth. They may apply what the soil wants, to keep good what the roots have taken from it to grow the wood and fruit of the tree; but it will be accidental, purely, with most of them, if they do, for they have too much to think of to investigate such small matters. If we tell them their land wants what it can only get from lime, ashes, or some other special manure, they tell us they have carried on this same farm forty years, and don't want any of our advice. I should know they had carried it on a good while, from appearances around the premises.

After trees grow to be eight or ten inches through, the roots that do the most good, are eight or ten feet from the body—the fine, fibrous roots. Now if instead of caring for and supplying these fine, fibrous roots with the various ingredients they want to grow wood and fruit from, we cut them off or rob them of what little they would get from the air, &c., what can we expect? Small profits from our land, and no profit from our trees. It will be well to remember that we were placed here to learn, as well as earn.

I see the borers are destroying many young apple trees about Saxonville, and would advise persons to look well to their trees. I take a sharp knife, and small wire, a foot long, and make war with them, cutting out what I can, always cutting up and down the tree, with the bark, and not across it, and punch to death what I cannot cut out. The eggs are laid very near the surface of the ground, under some old, loose piece of bark; hence the necessity of keeping the tree scraped clean; and a pile of ashes around the bodies, three or four inches high, has always kept them away from my trees. I put the ashes around in the month of May, and first of August scatter them under the trees and put around more, the next May and August doing the same, and until trees are eight inches through. As for quantity, I never have used enough to injure a tree, and have used from four to sixteen quarts, according to the size of tree, in a year, for several years in succession.

A man some nineteen miles from Boston, told me yesterday he had only had one number of the *Farmer*, and was satisfied that only the reports of the markets last week had saved him his subscription. He was a rich and intelligent man, and wants to improve his mind as well as land and

circumstances. Such a man takes some comfort in living, and it does one good to meet and converse with such.

F. J. KINNEY.

Worcester, Dec. 18, 1861.

THE SEASON.

It is rarely the case that the farmer enjoys so favorable an opportunity for closing up his "fall work," as he has had the present season. The weather for nearly the whole month of November was such as to enable him to engage in plowing, ditching, gathering materials for the compost heaps, getting out rocks, hauling out manure, or in building, or planting or pruning trees. This mild and dry weather has continued to the present time, Dec. 21, and now the drought in many places begins to pinch. Wells are dry that have yielded a plentiful supply of water for many years past, the small streams are quite low, and some of them, dignified with the term river, are much below their usual stage at this season.

The mild state of the weather through the autumnal months had the effect of ripening the wood of the trees and shrubs, so that they will be quite likely to stand the changes of the winter months without being injured. Our losses within a few years past have been very severe by the sudden and wide extremes that have taken place in the temperature. The peach and cherry trees are nearly all cut off, the quince has suffered, as well as many of the shrubs, and last winter seriously affected the Baldwin apple trees in many localities. We hope these extremes will have some compensations for us in the destruction of myriads of insects by the changes themselves, or from the want of food caused by the shortness of the crop.

Wherever we have visited in New England during the fall months, we have found many farmers busily employed in some of the items of labor which we have enumerated, and all agreeing in opinion that the favorable fall weather will greatly facilitate the work of the coming spring.

The winter grains, wheat, barley and rye, have had time to get well rooted, are generally looking well, and will be quite likely to escape being winter-killed. We have seen two or three pieces of winter barley that are exceedingly fine.

"THE WAR AND THE FARMER.—We call the attention of every reader to an article in another column on this subject, and especially of those who are inclined to be despondent and doubt our ability to crush the present rebellion, carry on successfully one or two wars beside, if pushed to the wall, and feed the starving Irish when the English people prefer to be fighting with us rather than feeding the paupers which her rapacity has made.

We see no cause for discouragement—some for anxiety—but none for despondence—but every-

thing to cause us to "rejoice always," so long as we strive to do right. We have the most lively faith that "Providence is shaping our ends, rough hew them as we will;"—that he will carry us through this fiery trial by the unflinching energy of our free people, and that they will show the world that we fully appreciate our unparalleled blessings, and are ready to sacrifice anything but duty for them.

Let us, then, individually, seek strength and guidance from that Fountain of all supplies, which the President sought when he started for Washington, and made his first addresses to the people of Springfield and Indianapolis. From that moment, we have had confidence in him as a fitting leader for our people.

LADIES' DEPARTMENT.

DOMESTIC RECEIPTS.

PLAIN CUSTARD.—Boil a pint of milk, in which place two ounces of sugar, the thin peel of half a lemon; break in a basin four eggs, beat them well with a fork, then pour in the milk by degrees, not too hot; mix it well, pass it through a cullender or sieve, fill cups with it, which place in a stew-pan, on the fire, which contains one inch of water; leave them for about twelve minutes, or till set, which is easily perceived.—*Soyer.*

COFFEE, COCOA, OR CHOCOLATE CUSTARD.—Make some very strong coffee, beat the eggs as above; put in a pan half a pint of milk and half a pint of made coffee, with two ounces of sugar, then add the eggs, pass through a sieve, and proceed as above. Chocolate and cocoa the same, only omitting the lemon peel in all three.—*Soyer.*

YORKSHIRE PUDDING.—Beat up two eggs in a basin, add to them three good table-spoonfuls of flour, with pint of milk, by degrees, and a little salt; butter the pan, bake half an hour, or bake under the meat; cut it in four, turn it, and when set on both sides it is done. A tin dish, one inch and a half deep and eight inches wide, is the most suitable for such proportion.—*Soyer.*

TO PICKLE CAULIFLOWER.—Cut it up into small pieces; boil in salted water till done, throw it into cold water awhile, then put into your jar of mixed pickles.

HOW TO MAKE CORN GRIDDLE CAKES.—Almost every one is interested now in knowing how to make corn cakes most palatable, since so much of it will be used in these straitened times. The following is said to be an excellent receipt:—Scald at night half the quantity of meal you are going to use, mix the other with cold water, having it the consistency of thick batter; add a little salt and set it to rise; it will need no yeast. In the morning the cakes will be light and crisp. Skimmings, where meat has been boiled, are best for frying them with. Fry slowly.

MILK TOAST.—Place the milk to heat, mix a tea-spoonful of flour smoothly with a little milk, stir it in, and let it come just to a boil, with a piece of butter the size of an egg to a quart of milk,

and some salt. Place your toast in a deep dish, and cover it with this gravy. Thin cream, omitting the butter, makes a nicer dish for those who are so fortunate as to have it to use.

BEEF PIE.—Make a nice crust, a little richer than for biscuit; chop up pieces of the boiled round of beef, when you have them cold; season with salt, pepper and butter, and onions if you like; line the basin with crust, rolled about half an inch thick; fill the beef, moistened with gravy or water; dredge in a little flour, cover, bake half an hour.

CURE FOR EARACHE.—An exchange paper recommends the following as a certain cure for the earache: Take a small piece of cotton batting, or cotton wool, make a depression in the centre with the end of the finger, and fill it with as much ground pepper as will rest on a five cent piece, gather it into a ball and tie it up; dip the ball into sweet oil and insert it in the ear, covering the latter with cotton wool, and use a bandage or cap to retain it in its place. Almost instant relief will be experienced, and the application is so gentle that an infant will not be injured by it, but experience relief as well as adults.

A DISTINGUISHED physician, who died some years since in Paris, declared: "I believe that during the twenty-six years I have practiced my profession in this city, 20,000 children have been carried to the cemeteries, a sacrifice to the absurd custom of exposing their arms and necks."

YOUTH'S DEPARTMENT.

THE TOOLS GREAT MEN WORK WITH.

It is not tools that make the workman, but the trained skill and perseverance of the man himself. Indeed, it is proverbial that the bad workman never yet had a good tool. Some one asked Opie by what wonderful process he mixed his colors. "I mix them with my brains, sir," was his reply. It is the same with every workman who would excel. Ferguson made marvellous things—such as his wooden clock, that accurately measured the hours—by means of a common penknife, a tool in everybody's hands, but then everybody is not a Ferguson. A pan of water and two thermometers were the tools by which Dr. Black discovered latent heat; and a prism, a lens, and a sheet of pasteboard, enabled Newton to unfold the composition of light and the origin of color. An eminent foreign *savant* once called upon Dr. Wollaston, and requested to be shown over his laboratory, in which science had been enriched by so many important discoveries, when the doctor took him into a study, and, pointing to an old tea-tray on the table, containing a few watch-glasses, test-papers, a small balance, and a blow-pipe, said: "There is all the laboratory I have!" Stothard learnt the art of combining colors by closely studying butterflies' wings; he would often say that no one knew what he owed to these tiny insects. A burnt stick and a barn-door served Wilkie in lieu of pencil and canvas. Bewick first practiced drawing on the cottage-walls of his native village, which he covered with sketches in chalk; and

Benjamin West made his first brushes out of the cat's tail. Ferguson laid himself down in the fields by night in a blanket, and made a map of the heavenly bodies, by means of a thread with small beads on it, stretched between his eye and the stars. Franklin first robbed the thunder-cloud of its lightning by means of a kite made with two cross-sticks and a cross handkerchief. Watt made his first model of the condensing steam-engine out of an old anatomist's syringe, used to inject the arteries previous to dissection. Gifford worked his first problem in mathematics, when a cobbler's apprentice, upon small scraps of leather, which he beat smooth for the purpose, while Rittenhouse, the astronomer, first calculated eclipses on his plow-handle.—*Smiles' Self-Help.*

EVIL SPEAKING.

One night, I remember it well, I received a severe lesson on the sin of evil speaking. Severe I thought it then, and my heart rose in childish anger against him who gave it; but I had not lived long enough in this world to know how much mischief a child's thoughtless talk may do, and how often it happens that talkers run off the straight line of truth. S—— did not stand very high in my esteem, and I was about to speak further of her failings of temper. In a few moments my eye caught a look of such calm and steady displeasure, that I stopped short. There was no mistaking the meaning of that dark, speaking eye. It brought the color to my face, and confusion and shame to my heart. I was silent for a few moments, when Joseph John Gurney asked very gravely:

"Dost thou know any good thing to tell us of her?"

I did not answer, and the question was more seriously asked—

"Think, is there nothing good thou canst tell us of her?"

"O, yes, I know some good things; but—"

"Would it not have been better, then, to relate those good things, than to have told of that which would lower her in our esteem? Since there is no good to relate, would it not be kinder to be silent on the evil? For charity rejoiceth not in iniquity."

A MOTHER'S KISS.

A day or two since, a ragged and dirty-looking boy, fourteen years of age, pleaded guilty in the Superior Criminal Court to having fired a building. For two years past, since the death of his mother, he had wandered around the streets a vagrant, without a home or human being to care for him, and he had become in every respect a "bad boy." A gentleman and a lady interested themselves in his behalf, and the latter took him one side to question him. She talked to him kindly, but without making the slightest impression upon his feeling, and to all she said he manifested the greatest indifference, until she asked him if no one had ever kissed him. This simple inquiry proved too much for him, and bursting into tears he replied—"no one, since my mother kissed me." That one thought of his poor dead mother, the only being, perhaps, who had ever spoken to him kindly before, touched him to his heart, a hardened young criminal though he was. The little incident caused other tears to flow than his.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. XIV.

BOSTON, FEBRUARY, 1862.

NO. 2.

NOURSE, EATON & TOLMAN, PROPRIETORS.
OFFICE...100 WASHINGTON STREET.

SIMON BROWN EDITOR.
HENRY F. FRENCH, ASSOCIATE EDITOR.

CALENDAR FOR FEBRUARY.



N some ancient calendars, FEBRUARY occurred last in the order of the MONTHS. Being, as it always is, fractional at best, and somewhat regular as to its number of day, but, omnibus like, always having room for "one more," in case the almanac makers happen to have an extra day on

hand, it might seem that the rear was the most appropriate place for this month. Why it was changed from the bottom of the column to its present rank of second in the order of precedence, we have forgotten, if we ever knew. One reason, however, is suggested for the adoption of the present arrangement. As it now stands, the shortest month comes in the coldest and most stormy portion of the whole year. As we stamp our feet, and slap our hands in the biting cold of a February morning, it is encouraging to think, and we often tell the boys to remember, that February hath only twenty-eight days, and will soon be gone!

The MONTH, then, upon which we now enter, being a short and a cold one, what shall we do with its few brief days, and long, cold nights?

Time, it has been said, is money; and even the poets talk of its golden sands. But time is money to those only who resolutely turn it to a good account. To the bear which dens up in the fall, and sleeps unconsciously all winter, or to those ants so often found in logs of wood at this season, stiff

and motionless, time is not money. Nor will time be money to us if we pass the winter as these creatures do. And there is danger that we may spend this season even more unprofitably; for, unlike these hibernating animals, we cannot doze all winter, and then wake up in the Spring as bright as ever. Progress is the law of our being; and progress, either forward or backward, we are making constantly.

This season of the year,—“the dead of winter,” as it is sometimes called,—when frost and snow have possession of our fields, and we find ourselves able to do but little directly towards the improvement of the soil, is a most fitting opportunity for the prosecution of that other branch of our business, the improvement of the mind. The very elements now so fiercely warring without, conspire to drive thought home, so that these long evenings have been aptly termed the seed-time of the laboring man’s intellectual harvest. A seed-time and a harvest, which, unlike those of his fields, intermingle the one with the other, and in which men not only reap *what* they sow, but *as* they sow—the grain ripe for the sickle springing up while the seed is being planted; scions from the tree of knowledge grafted into the mind bearing fruit even before the stock and the branch are firmly united.

It is not because we fear that our readers are insensible to the importance of mental culture that we make these remarks. They all know that knowledge is power. There is not one who does not desire that wisdom should be first on the list of his accumulations. But, by our own experience, we know that after a day’s exertion of the bodily powers, it requires the impulse of a strong will to keep the mental faculties busy while the hands rest. It is to encourage the putting forth of this power of the will—this determination to know, which is sometimes strong enough to overcome the fatigue of the body—that we now allude to the subject. We believe that the force of the supposed antagonism between the labor of the hands and

that of the brain is greatly over-estimated. The celebrated Scotch stone-cutter, Hugh Miller, confessed that he found it far more difficult to put his mind down to hard study and to keep it there after he entered upon the duties of bank clerk, than it was while he worked steadily at his laborious trade. The difficulties experienced in attempting to study, after a day's labor with the hands, arise less from the fatigue of the body, than from the want of the habit of systematic application. The formation of the habit of applying the mind steadily to any given object is the great design of the whole "course and discipline" of our highest seminaries of learning. Every moment, then, that the mind of the laboring man is made to grasp an idea or a thought firmly is so much gained towards making the next attempt to study easier, and the next grasp of the mind firmer and more continuous; so much, in fact,—though those moments may be employed in the humble dwelling of the farmer,—towards an education.

That it is not only the privilege, but the duty of all, to take some time and some pains to improve the mind, is most forcibly indicated by the well established fact that the liability of sinking, in old age, into that most pitiable condition known as "dotage," or "second childhood," is pretty much in proportion to the neglect of the exercise of the intellectual faculties in middle life. But reading and study alone are not enough. The current of thought which they set in upon the mind must flow out, or the stream becomes stagnant. We must speak or write as well as read, or we tire of the latter.

"Mind with mind must blend and brighten,"

or it becomes weak and dim. At his creation it was said, "it is not good for him to be alone." It is also a law of his nature that he should give as well as receive, and in the former he is often more blessed than in the latter.

Hence the necessity and advantages of social intercourse in all its improving forms. Hence, too, the necessity of farmers' clubs, which we have so frequently recommended, and of that more familiar intercourse between neighbors, especially in sparsely settled agricultural districts, which each one probably desires, but which has been so long neglected that all settle down in the conviction that nothing can be done to make the neighbors more social and friendly. Perhaps something can be done this month to break up this stiff crust of apparent indifference.

But at present our object is rather to recommend that some of the spare hours of February be employed in the vigorous exercise of "speaking with the pen." This has advantages over oral speech which we shall not now stop to particularize, further than to quote the following lines :

"To remember, write ; to be accurate, write ; to know your own mind, write ;
Hast thou a thought upon thy brain, catch it, while thou canst !
The commonest mind is full of thought, some worthy of the rarest,
And could it see them once in words, would wonder at its wealth."

One of the most effectual remedies for a poor memory, so often complained of, is unquestionably the practice of writing. Franklin fixed his style by reading a page or two of the Spectator, then writing it from memory, and afterwards comparing it with the original. With such a purpose in view, we shall read carefully, and the truth will soon be discovered that it is owing to our bad habits of reading, rather than to a poor memory, that we forget so much.

We believe, also, that the "commonest mind is full of thought," and that the world has lost much from the inability—which a little practice would have remedied—of many a good man to put his thoughts on paper in such a manner that the writer could see,

"Smiling upward from the scroll,
The image of the thought within the soul."

It has been observed, that to come into contact with other minds—to move them by a silent influence—to exercise a spell over those we have never seen and never can see, and when the hand that wrote is still forever,—is a most wonderful prerogative, and one well worth striving for.

As an application of these remarks, we would urge farmers to write for agricultural papers. Never mind if your expressions are not quite as elegant as you could wish. Don't give up on that account. Practice makes perfect. The Editor will correct any little verbal improprieties. Give the facts. Give your experience. Give them as briefly as possible. The value of the *New England Farmer* has always been in a great measure dependent on the contributions of practical, hard-working farmers. It still depends on them. Many may find leisure time for this purpose in the Month of FEBRUARY.

PLEURO-PNEUMONIA.

In the last number of the *Mark-Lane Express*, London, the editor says that "the lung sickness or consumptive disease is spreading among cattle in Australia. M. Jourdier, a French agriculturist, who has recently visited Russia professionally, states that so great are the ravages committed by this disease, that in one large village, which he cites as a by no means uncommon instance, the inhabitants had lost literally the whole of their stock at the time of his visit. He was assured that in 1859, Russia lost upwards of 3,000,000 head of cattle by this disease, and the official returns admitted that the loss amounted to 1,600,000 head between January and November of that year. M. Jourdier states that the disease may be greatly

For the New England Farmer.

STRAW HIVES.

MR. EDITOR:—The article with the above heading, some months since, in the *Farmer*, called out some remarks from Mr. Brackett, that deserve some notice, even though it may have been nearly forgotten in the long time since it was written. I propose to examine the principles involved, a little farther. I will endeavor to avoid personalities, and hope you will have patience to hear me through. I am not sure but what we bee-keepers ought to be indulged to a reasonable extent in *pointed* remarks, rather more than most of your correspondents, seeing that we have a daily example of *short* and *sharp* arguments in resentment of all insults, real or imaginary. Even the *stinging* thrusts of Mr. Kidder and Mr. Brackett are not without some benefit. Mr. Kidder, having a hive and book, promises us, if we will read the one, and use the other, a thousand impossible things, and we that know no better, are induced to expend our money, and expect in return a part at least of the bright promise. Mr. Brackett interposes, and exposes the fraud for our benefit, but in doing this, perhaps he says a *little* more than is necessary. Then it seems proper for Mr. Kidder to point out these excesses. Now it may be, that these gentlemen, accustomed to the sting, cannot write very well without showing it. If this should be so, had we not better tolerate the whole, than to refuse to hear them altogether? The subject being a dry one, might not be relished without the spice. These criticisms also serve to call attention to the subject, and consequently promote more or less investigation. In the straw hive that I recommended, I presumed there were several advantages. Mr. Brackett saw, or thought he saw, serious objections, and has given them to the public. It is hardly possible to read over the list, together with my remarks, without investigating the principles somewhat, and be better qualified to decide whether straw hives are an advantage, or otherwise.

That part of Mr. Brackett's article to which I wish to call attention, commences with these remarks: "Judging from an article in your paper of the 13th, it would appear that a new and fruitful field is to be opened for patent hives, and Mr. Quinby, who has hitherto had a holy horror of patent hives, now summons to his side the innumerable host of inventors. He assures us that he has, at the present time, a straw hive, adapted to improved bee-culture, and if he cannot get a better one, he will shortly give us a description of it. Before the country is deluged with these new patent hives, I should like to look into them, and see in what the advantage, if any, consists. Mr. Quinby says, 'that they are warmer in winter, and cooler in summer.' I will leave this assertion for some future occasion, still satisfied in my own mind, that it is like the Irishman's grog, that kept him warm in winter, and cool in summer, and was good at all times." I am sorry he left to a future occasion, the exposition of this fallacy, if it is one, because, despite the ridicule attempted, the principle is just as tenable as before. As I intend to give the promised description, it would have been well for your readers to clearly comprehend all the real objections against the hive, before any one is induced to make it. The assertion, however, was a

quotation from Mr. Langstroth—"Hive and Honey Bee," page 331, revised edition. "Straw hives have been used for ages, and are warm in winter, and cool in summer. The difficulty of making them take and retain the proper shape for improved bee-keeping, is an insuperable objection to their use." It being an assertion of Mr. L., proves nothing further than that the principle is more generally recognized than Mr. B. supposed.

Again, I say that straw hives absorb moisture as generated by the bees, and save them the warmth they have generated. Mr. B. replies, "If this is true, its author has added a new chapter to the philosophy of heat and moisture. I had supposed that when a body was sufficiently porous to allow moisture to pass freely through it, that there was a good deal of danger that any amount of heat inside of such enclosure would be likely to go the same way." Now I recognize this principle as the true one. I would suggest that the "new chapter to the philosophy of heat and moisture" was discovered long ago, and has been acted on for centuries. Is it not an acknowledged fact, that solid bodies are much better conductors of heat than porous? To illustrate. Handle a piece of iron and a piece of wood. Put on a coat of India rubber, or one of wool, one impervious to air and water, the other admitting the passage of both; one conducts away from the body the insensible perspiration, and retains the warmth; while with the other, the effect is exactly reversed, the moisture is retained while the heat is thrown off. We recognize this principle in the rubber shoe; instead of using it for warmth, it is put on as a protection against water. A garment of linen or cotton conducts heat much more rapidly than one of wool. Perhaps the fact that the fibres lie more compact, would explain the cause. Air is considered a poor conductor of heat. We readily succeed in warming a room, but it is when the heated particles can move from the fire—forming a current of air—and give place to others that become heated in turn. But confine air, in what is called a dead air space, as we do in the walls of a house, or, if you please, confine it to the little cells in a woollen garment, and the heat is very slowly passed. Now I conceive that straw, as a material for a bee-hive, will act on the same principle; the thousand little air-cells are so many dead air spaces, which prevent the escape of the warmth, and yet allow the passage of moisture. I speak comparatively, for some warmth, of course, will escape, but nothing like what will go when the holes in the top of a wood hive are opened. The moisture from the bees must be got rid of. I can readily conceive how a hive, with the boards of it thoroughly water-soaked, would conduct away the heat much faster than when they became thoroughly dry. In one case, the pores of the wood are filled with water, and become a good conductor, like a wet garment; in the other, the pores become filled with air, and the heat passes slowly. When a current of air is established, as in the wood hive, when the holes are opened in the top, to get rid of the moisture, as a matter of course, the heat will move with it. Hence the advantage of some material that will retain the one, and dispose of the other.

But Mr. B. says, "Place a swarm of bees in a straw hive, and they will do very different from any bees I have ever seen, if they do not line the inside with propolis, a substance impervious to air

and moisture." Whether this objection is as extensive as apprehended, is yet to be proved. I know that the little niches where the straws lie together, are filled with it, but whether the smooth rounded surface of the straw is sufficiently coated to prevent the absorption of moisture, is not determined. But should this be the case, and the objection remain in full force, it is so easily obviated that it amounts to next to nothing. To remove it, we have only to take out the combs—they are movable—and put them into some other hive for a short time, and apply boiling water. Or, suppose—as the advantages of straw are claimed mostly for winter and spring—that at the beginning of summer, and before any propolis is gathered, we change the combs to a wood hive, and again return them on the approach of cold weather. The top being of straw, is unsuitable for the surplus honey boxes, and of necessity is taken off when they are used. This will be in proper condition whenever put on in cold weather.

The only advantages that Mr. B. can see in a straw hive, are its dome-like shape, and that it cannot be easily robbed of its stores. The conical shape allows the moisture, as it "condenses at the top, to run down the sides of the hive, instead of dropping down among the bees and comb." If its superiority was here, it would seem that when we opened the holes in the top of a wood hive, and let the moisture ascend into the chamber, condense, and pass out, it would be as effectually out of the way of the bees, as in running down the sides of a conical shaped straw hive. If keeping the moisture from the bees and comb was all, we should have the same thrift as with the straw hive. But it is not here.

That bees swarm ten days earlier in straw hives, "is not confirmed by many who have the straw hive side by side with wood, when no boxes are used for surplus." Here appears to be an acknowledgment that they do swarm earlier than some others. Now what is the cause? He says no boxes are used for surplus. Whether it is the room that the boxes afford, on taking the honey, we are left to infer. If he means the room, I would say that not one-half of the stocks go to work in the boxes before swarming. If the honey taken away, not one in a hundred is robbed before that time. Can it be shown by experience, or any course of reasoning, that when the hive is full, and the bees clustered outside doing nothing for want of room, that an extra box filled, and even removed at such a time, will make any perceptible difference in the issue of the swarm? If there should be a difference, it would be likely to be in favor of the earlier swarm. In good seasons, it is often the case that too many of the brood combs are stored with honey, instead of being filled with brood, thereby retarding the increase of bees, and consequently making the swarm later.

"Mr. Quinby says that the best material for a hive is *straw*, and that he has clearly shown it." I would like to qualify this, by saying *available* material. Perhaps there are many other materials better, if we could only afford them. On this point, I would quote a little further from Langstroth. "The *lighter* and more spongy the wood, the poorer will be its power of conducting heat, and the warmer the hive in winter, and the cooler in summer." "A serious disadvantage attending all kinds of wooden hives, is the ease with which they

conduct heat, causing them to become cold and damp in winter, and, if exposed to the sun, so hot in summer as often to melt the combs." From these remarks, I can easily imagine that Mr. L. would have recommended straw, if any shape "adapted to improved bee-culture" had been suggested.

Mr. B. offers his last argument thus: "I am by no means sure that there is any real advantage in a straw hive. Certainly not, if the form is to be changed." I would say, *certainly not*, unless the form is *changed* from the old dome to one adapted to improved bee-culture—the surplus boxes, and movable combs.

Mr. B. concludes with the following compliment: "It is with some reluctance that I differ with Mr. Quinby. My first ideas of bee-keeping were derived from him, and I might still have regarded him as undoubted authority, had not accident thrown in my way the Langstroth hive, by which I learned more in one season, than I should have found out in a life-time, by using the twelve by fourteen box hive. As it is, I trust Mr. Quinby will not blame me, if I am not tickled with his straws." By this it seems that my authority might have yet been "undoubted," had it not been for that Langstroth hive by which he learned so much in one season. Now, without pretending to be infallible, I would like Mr. B. to tell us wherein he has proved my authority fallacious? Has he not, on the contrary, with the help of these movable combs, verified many points that would tend to establish it? What he has discovered *really new*, if he would make it public, I would be one of many to heartily thank him for. These things I have a right to ask. As for blaming him for not being "tickled," I am not in the least disposed that way. If he chooses not to use the better hive, the consequence will be with him, not me. I shall not gain or lose one cent, if he does, or does not use it. I am not the interested patent vender that will fail to make a V, if he fails to be persuaded. Perhaps he will feel less prejudice towards this hive, when he understands that it is still claimed as the Langstroth hive. M. QUINBY.

St. Johnsville, N. Y., Dec., 1861.

For the New England Farmer.

CULTURE OF THE KOHL RABI.

MR. EDITOR:—My boys, the past season, sowed a few seeds of kohlrabi in a bed, and transplanted them in drill, about the first of August. The weather was very dry, and the plants had a hard struggle for life, for a number of weeks. As soon as we had rains they revived, and when gathered, the middle of November, yielded near four times the quantity, on the same surface, as carrots along side of them. I have not any experience with this root. The yield is satisfactory, but I think they will require more careful preparation or cutting up, before feeding, than other roots, as they appear to be very hard. If, as is alleged by those who have fed them to milch cows, they impart no flavor to the milk, as turnips and cabbages do, I shall regard the kohlrabi as an important acquisition to our farm crops. Brother farmers, send to the *New England Farmer* your experience in the culture and use of this root. O. K.

Rochester, Mass., 1861.

TRAINING STEERS.

A correspondent of the *American Stock Journal* gives his experience in the training of steers. He says they should be—

1. Accustomed to your presence.
2. Trained to be yoked—to travel in the yoke, and turn right and left at command.
3. Trained to work.

The first should be accomplished long before "breaking," as it is termed; if, however, it is not, it may be very easily done by handling the animal—if it must be by force, *handle*, always being deliberate and careful in action, and never be thrown off your guard so much as to strike or kick. The creature will soon learn he has nothing to fear—now let him know he has something to gain, by giving him a nubbin of corn, or scratching his neck, back, etc. Whenever you undertake to handle an animal, accomplish what you undertake; and if you have any doubts as to the result, do not begin until you have force enough to be sure of success. If you do begin, and fail at first, persevere until you finally conquer—that's the word—*conquer*.

Any animal is a long time forgetting a triumph. I would rather teach ten wild steers to handle that have never been tampered with, than one that has once come off "best." The most skilful man we ever saw at handling cattle, did it with the least expense of feeling to them, and yet, when they refused to perform, he used the most imperative force to compel obedience. An animal came from his hands tamer and more gentle than from one who resolves not to force. Use then force enough—do what you attempt, but be always mild and gentle—show no temper.

Training to the Yoke.—This is easiest and best done in the barn-yard. Drive them quietly around for a considerable time—mind, you drive them, if not they scamper where they like, without perceiving that you are master. After half a day of such driving, many steers will submit to be yoked, by the driver alone, and wild ones will soon be so wearied as to be readily yoked. In this regard you have to judge whether best to yoke by calling in help, or keeping them going until you can yoke them by yourself. When you have them yoked be gentle with them—let them know you are master—keep them going until weary, but very little after.

It is easy to learn steers to turn right and left, when you have them in the yard under your control. Touch the near one when you wish them to go the right—the off one when to the left; or if you wish them to turn about, start one ahead quick by a touch, while you motion the other back at the same time.

Training Steers to Work.—This is by far the most critical part of "breaking steers," and should be accomplished by gradual approaches, being careful not to worry nor weary them. Suit their tasks to their strength and endurance, and have patience now, that when they are fully grown, they may not be prematurely "old cattle." How many pairs of so-called slow cattle, are really so? They are old in appearance, and slow, because when young, their spirit was destroyed by overwork. Cattle are more unfitted than any other animal to severe labor before attaining their full growth and constitutional development.

In breaking steers, bear in mind that you must

subdue their will, but maintain unimpaired their natural animal spirits.

One year ago we trained two pairs of steers; one pair was wild, and had to be caught with the lasso. This pair we had gentle and tractable in one week, and yet one of them possessed an almost unconquerable will. In getting him home we yoked him with his mate and could not drive them. We then hitched a strong pair of oxen ahead and drew him—he part of the time sliding on the ground, and part of the time pulling back all he was able, but firm; and in one hour he was subdued, and we had no further trouble with him.

In training steers, use all the force necessary to bring them under your control; then gentle them by being mild and gentle yourself. No animal thinks less of you for conquering, if you do not abuse your superiority.

THE SNOW STORM.

Announced by all the trumpets of the sky,
Arrives the snow, and, drifting o'er the fields,
Seems nowhere to alight; the white air
Hides hills and woods, the river and the heavens
And veils the farm-house at the garden's end.
The sled and traveller stopped, the courier's feet
Delayed, all friends shut out, the housemates sit
In a tumultuous privacy of storm.
Come, see the north-wind's masonry!
Out of an unseen quarry, evermore
Furnished with tile, the fierce artificer
Curves his white bastions with projected roof
Round every windward stake, or tree, or door;
Speeding the myriad handed, his wild work,
So fanciful, so savage, naught cares he
For number or proportion. Mockingly,
On coop or kennel he hangs Parian wreaths;
A swan-like form invests the hidden thorn;
Fills up the farmer's lane from wall to wall,
Maugre the farmer's sighs; and, at the gate,
A tapering turret overtops the work;
And when his hours are numbered, and the world
Is all his own, retiring as he were not,
Leaves, when the sun appears, astonished Art,
To mimic in slow structures, stone by stone,
Built in an age, the mad wind's night work,
The frolic architecture of the snow.

Emerson.

THE ASHES OF VEGETABLES.

In chemistry, all elementary bodies are divided into two classes, viz.: *metals* and *metalloids*, or substances which in their character are non-metallic. As yet, only a very few of the elements known to chemists have been recognized in the ashes of vegetables. Those which have been detected in the residuum which remains after combustion, are, phosphorus, chloride, iodine, silicon, sulphur, bromine, potassium, calcium, sodium, magnesium, iron, manganese and fluorine. Iodine and bromine are found only in the ashes of marine plants,—kelp, seaweed, &c. When found, however, these substances are never in a simple, isolated state, but in combination with oxygen, (with the exception of iodine, chlorine and bromine,) and from which they are separated with much difficulty.

The distinction between metals and metalloids "depends upon their relation to heat and electrici-

ty. If a substance opposes no resistance to the diffusion of electricity through its body and over its surface, or, as philosophers express it, is a good conductor of heat and electricity, it is called a metal. If it presents characters the opposite of this, it is called non-metallic, or a metalloid." The salts detected in the residuum of vegetable substances submitted to the action of fire, are produced by a union of both these substances. Phosphorus, sulphur, iodine, bromine, chlorine and silicon, as also oxygen, hydrogen, nitrogen and carbon, are classified as non-metallic bodies, while the other elementary constituents, to wit,—sodium, potassium, calcium, manganese, iron and magnesium, belong to the class of metals.

When the non-metallic elements combine with oxygen, the result is the formation of an acid, and the same result ensues upon any of that class combining with hydrogen; and it is in this state that they are recognized in the soil, as well as in vegetables and their ashes.

Carbon, combined with oxygen, forms carbonic acid.

Sulphuric acid is a combination of sulphur and oxygen.

Phosphoric acid is produced by the chemical union of phosphorus and oxygen, and silicic and nitric acid are the results of the same union between silicon and nitrogen, and oxygen. Another feature presented by these acids is their propensity to form combinations with certain bases. These bases are found almost universally on the earth's surface, or mingled in its *crassus*, and invariably in the ashes of vegetables, and it is therefore by no means a matter of surprise that the two are seldom found in an uncombined state, in the soil, and invariably in a combined state in vegetables and their ashes, in the form of *salts*.

For the New England Farmer.

OVER A THOUSAND MEN

CRAWLING TWENTY-FIVE MILES ON THEIR HANDS AND KNEES—
NOT IN INDIA, BUT IN NEW ENGLAND!

If we were to go into the labor market and offer farm operatives sixteen dollars a month for the working season, with the condition annexed, that in the course of the season they should crawl twenty-five miles on their hands and knees, how many of our free Northern laborers, suppose you, would set their hands and seal to any such arrangement? Yet there are thousands of able workmen who readily engage themselves to our thrifty market gardeners, with the condition very clearly implied in the contract, that each of them shall perform in the neighborhood of twenty-five miles of hand-and-knee crawling in the course of the season.

If any of our readers will take his pencil in hand, and figure out the problem of the distance to be gone over in the care of two and a half acres of onions, which is about the average quantity allowed per man, planted in rows fourteen inches

apart, and requiring three hand-and-knee weedings in the course of the season, he will find, if my pencil mistakes not, that allowing two rows are taken each time, some twenty-six miles must be crawled over before the job is finally finished.

However, our worthy farmers, with knees well protected by stout woollen or leather pads, progress, tortoise-like, over the ground, and gradually wind up the season's work apparently without any serious inconvenience. An onion crop requires not only three such weedings, but also one or two hand weedings, towards the close of the season, and three hoeings in the course of it. With such data added to the extra cost of preparing, manuring and planting the ground, our farm friends who devote their acres principally to the grains, and sigh to hear of the heavy incomes derived from the culture of roots and bulbs nearer the city, will be better able to form some idea of the costs of such investments.

J. J. H. GREGORY.

Marblehead, Mass., Dec., 1861.

HOUSE PLANTS---WATER AND WATER- ING.

It is desirable that plants should be watered with rain-water; but as this cannot always be done, water from wells or pipes must, in such cases, be used, *but should never be used in a cold state*, as a quart of boiling water to a gallon of cold will in great measure rectify it, and save the cultivator the mortification of seeing the leaves of his plants turn yellow and drop off. So important do I consider this point, that I never give cold spring-water even to kitchen garden crops; and when in charge of a large place, had daily a copper going to supply hot water for all purposes of watering and syringes; and for syringing I consider it should be as warm as one can comfortably bear the hand in. To promote the growth of the plants in April, May and June, syringing should be done on the afternoon of bright days, just as the house is losing the full force of the sun's rays—say from three to five o'clock. The moisture will then be diffused into vapor, instead of hanging coldly about the plants, as it would do if given at a later period of the day; and to syringe in the morning may be attended with danger, for the sun striking upon the wet foliage might disfigure it. Syringing in a house will scarcely be required excepting during the period named, while the general stock is making its principal growth; even then plants in flower must be shunned, but the object sought by syringing is not so much to drench the plants as to create a soft growing atmosphere, which may be accomplished, if done before the sun is wholly off the house, by throwing the water into the air, and upon the roof and walls. Any individual plant or climber, on the other hand, that shows the presence of red spider, at whatever season, must be soundly soused; and this may be best done, in the case of pot plants, by laying them down upon a bass mat, and playing the syringe well at the under sides of the leaves; and this must be repeated often, until the spider is put to flight.

Watering at the root is an important matter; if plants are not supplied with as much as they require they do not attain to the perfection, either

in stature or flower, they are capable of, and are, in consequence, more subject to the attacks of insects. On the other hand, if supplied with more than they require, the soil turns sour, the leaves of the plant turn yellow, and it soon puts on anything but a pleasing appearance. Then, in order to shun these extremes, use observation, and give water whenever the soil seems to be approaching a state of dryness, and at no other time; this may happen twice a day, or twice a week, but give it then, and give it effectually, so that it passes out at the bottom of the pot. Plants that have grown so as to fill their pots full of roots, and plants in active growth, will be found to require much water in hot weather, but less in dull and damp weather; while others that have not so filled their pots, or that are not so vigorous, would be only ruined by a like application. The same rule holds good in the application of liquid manure, and in the using of pans to set the pots in; both of the latter do more harm than good, unless the pots are full of roots. The best liquid manure for pot plants is made by steeping horse and dry cow dung in a tub or tank, so constructed that the liquid can be drawn off clear, for turbid manure water renders the pots unsightly. The above is simple, and can scarcely do harm; but guano and other artificial manures must be used with extreme caution, say no more than half an ounce to a gallon of water.—*Garden Oracle, England.*

ACTION OF SALT AND SALTPETRE ON MEAT.

The following interesting account of the action of salt and saltpetre on meat will doubtless be new to many of our readers:

The manner in which salt operates in its preservative functions is obvious. Salt, by its strong affinity, in the first place, extracts the juices from the substance of meat in sufficient quantity to form a saturated solution with the water contained in the juice, and the meat then absorbs the saturated brine in the place of the juice extracted by the salt in the first place. Thus matter, incapable of putrefaction, takes the place of that portion of the meat which is most perishable. Such, however, is not the only office of salt as a means of preserving meat; it also acts by its astringency in contracting the fibres of the muscles, and so excludes the action of air on the interior of the substance of the meat. The last mentioned operation of salt as an antiseptic, is evinced by the diminution of the volume of meat to which it is applied.

The astringent action of saltpetre on meat is much greater than that of salt, and thereby renders the meat to which it is applied very hard; but in small quantities it considerably assists the antiseptic action of salt, and it also prevents the destruction of the florid or red color of the meat by the application of salt. From the foregoing statement of the mode of the operation of salt and saltpetre on meat, it will be perceived that the application of these matters deteriorates, in a considerable degree, the nutritive, and, to some extent, the wholesome qualities of meat; and, therefore, in their use, the quantity applied should be as small as possibly consistent with the perfect preservation of the meat.—*Exchange.*

FACTS AND FANCIES.

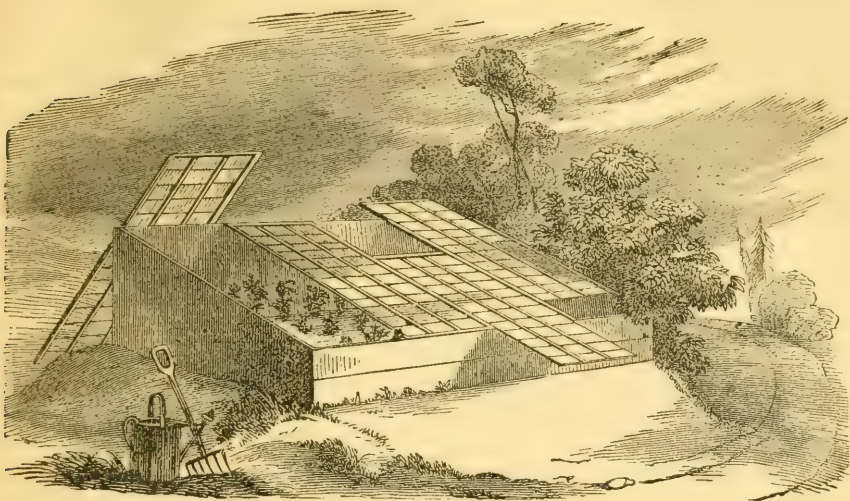
FAT SHEEP.—A drove of 200 sheep was recently taken in the New York market at a trifle over \$4 a head. An extra fine lot of Kentucky sheep, brought in by Levi Brine, sold 7 for \$49, 11 for \$80, 10 for \$75, and 10 more for \$75, which was equal to 9c per lb. for the meat, beside the value of the fat and pelts.

CORN IN ILLINOIS.—The Illinois Central Railroad runs through the Egypt of the Prairie State, and has been the means of adding many millions of bushels, annually, to the corn and other bread-stuff products of Illinois. By it the broad prairies have been broken up, and the station, the village, and the farm-house, now dot immense corn-fields where but a few years ago waved an unbroken sea of grass and wild flowers. This company has given notice that it will sell its lands and receive corn in the ear in payment, delivered on the car at any of the stations of the road, at eighteen cents for seventy-five pounds. To store the corn, the company is building *eleven miles of corn cribs* along the line of their road, twelve miles south of Chicago, with a capacity of 3,000,000 bushels!

EXTRAVAGANCE IN DRESS.—Dress may be elegant and not extravagant. It should be remembered that however the eye may be taken at first sight with a magnificent dress, it is *the wearer* that a man finally falls in love with. Greater economy in dress and a few other items of family expenses, would equal the extra taxes levied upon us by war.

THE OIL SPRINGS.—A gentleman named Denton, who has been investigating the matter, says that the oil found so abundantly in Canada, Ohio and Pennsylvania and many other localities, is not coal oil, but *coral* oil. He says,—“Stored away in cells, forming in the aggregate immense reefs, as it was collected from the impure waters of the early oceans by minute coral polyps, [an aquatic animal, that has no special organs of sense, and is capable of multiplying by buds and artificial sections as well as by ova.—*Ed. Far.*] it has been driven by heat and pressure into reservoirs and crevices where man’s ingenuity is discovering it day by day. I have in my possession many specimens of this fossil coral, with the oil plainly visible in the cells.” This is gratifying intelligence, and seems to us rational. It has generally been supposed that this oil came from coal, forced out by a tremendous pressure, and found its way to caverns where it has been waiting—perhaps for thousands of years—for the scientific researches of man to bring it to the *light*.

PEACHES IN MINNESOTA.—The *Minnesota Farmer and Gardener* says: The peaches grown about St. Paul are all protected in the winter by *training the branches near the ground and covering them in the fall.*



For the New England Farmer.

USES OF A HOT-BED

BY E. W. BUSWELL.

Market gardeners and commercial florists understand well the *absolute necessity* of hot-beds in the economy of their operations, and so also the wealthy amateur, but to the amateur of small means—he who cannot well afford to expend a dollar except its speedy return be sure—the thought of a hot bed, and its management, is so formidable as to “taboo” the affair quite effectually. Now it is to my timid brother of small means that I wish to give a few hints that shall assist him materially in growing his pets.

To begin, I assume three things: first, that he considers flowers essential to his happiness and well being, and *the more the better*. Second, that his condition precludes the possibility of his giving much time to their culture; and thirdly, that he is willing to *repay the soil* for its contribution to his happiness.

Shrubs, herbaceous perennials, and the like, we will not consider now. They know no difference between the poor and the rich; so, also, the more hardy annuals do well under ordinary treatment; but all this don't satisfy us. We want a “show” of the finer and more delicate growing exotics, and *will have* them.

Suppose we try first to grow them in the ordinary mode of open culture, and let the lumbering hot-bed go. With great care we select the choicest seeds, and with full confidence in our ability to do the whole thing justice, we await the proper time for planting. It seems as though the ground never would be warm enough, spring is so backward, and it takes the cold rains so long to fill the ground and “go away;” but at last the bright sun has shone upon the earth for a *whole day* or more, in the seeds go, “for better, for worse,” and we “lay back” with splendid visions of the future, to await their coming. Time is plenty wherein to speculate on probabilities, and

lay our plans for dispensing beautiful bouquets among our less privileged friends; but how is this? why don't they come? I know I gave to each its proper depth according to its kind, and I have only here and there an indication of vegetable life, except weeds, which grow without aid; still we watch and pray, still they don't come, and we wait and wait, until hope is extinct; plant again—again the same result; call the seedsman a cheat, resolve to shun him in future, and fall back upon sunflower and marigold, seeds of which *we* saved, extend our faith another twelvemonth, and pocket our disappointment with all the grace at our command. So much for that system.

Now let us make a *hot-bed*, and see if we have cause to regret it. We design manuring the garden, so we buy stable manure in March, wherewithal to do it. No matter if it be coarse and cheap, we can improve the quality before autumn, many fold, and be richly rewarded in the process.



We begin by throwing it in a heap, so as to present as little surface as possible to the atmosphere, and while fermentation is beginning its work, we will get the frame ready. A good size for our use is 5×10 feet square, 10 inches high in front, 18 in the rear, with the ends shaped of course to match. Let these be cleated so as to prevent warping, and fasten together at the corners with hasps. Let in, flush with the edge, narrow strips

at proper distances for the sashes to slide on, with a narrower one in the middle for a guide. These will accommodate four sashes of proper proportions for glass eight inches wide, which should be inserted in grooves, rather than by the old method of puttying, as putty soon crumbles with such severe exposure.

We will now suppose the manure is ready to move, and the time almost the first of April, long before it would be safe to put seeds in the ground, and when but little else can be done outside. Now we measure a space 12×7 feet (to give a projection of a foot all round outside the frame,) on a spot well sheltered from cold winds and open to the sun. Commence by setting boards on edge secured by stakes, and fill in first with a layer of straw, leaves or other similar material, and then a layer of manure, beating it down with the fork, but not treading it hard. Thus continue until you have used sufficient litter to make it, with the manure, about two feet high. Put on the frame, cover the outside bank with boards laid flat, fill in with about four inches of tan, put on the sashes, and while the heat is getting up, we will get ready our seeds, &c., and prepare materials for potting.

Here, again, is an outlay of cash for pots, but we won't regard that when we see how useful we make them before summer is gone. We shall want some bits of charcoal for drainage, from which we can sift the dust to mix in the soil for potting. We last fall secured some excellent peat, laid up a little loam, and saved a remnant of the old hot-bed, (if we had one.) These, in equal parts, with a generous sprinkling of the coal dust, make a good soil for present purposes.

In about a week after the bed is made, the heat will be up, as we may find by thrusting a sharp stick into it, and we may now begin to sow in pots, seeds of such plants as are of slow growth, or will soonest bear turning out. A little practice will teach us when is the best time to start with the various kinds. Plunge the pots to the rim in the tan, and the bottom heat will do its "perfect work." We see that by having the seeds in our power, we can control heat and moisture at pleasure, and will scarcely make a failure, unless some careless person leaves the glass on too long during hot sunshine, while the "husbandman" works. Here, too, we will start such summer bulbs and tubers as require a season longer than ours, and of others, a few, to secure a longer season of bloom. Soon we begin to "prick out" the young plants, and "pot off" and "shift," so that our good time has come indeed. Who that has no hot-bed of his own, does not envy us our pleasure, and that too for weeks before he can hope to start on his own hook?

To watch carefully to prevent burning, to water as may be necessary, to give air to prevent damping off, and to close before nightfall, covering with mats, are amongst our cares, until now the ground is warm enough to begin to "turn out," so out they go. Ordinary transplanting requires much care even in cloudy, or rainy weather, which cannot always be had at will; but we can snap our fingers at the weather, for we disturb no little spongioles in the operation. If the sun is too hot for them, invert the pots over them, but remove them again before the dew falls. This is another use for the pot. A third use is in irrigation, which is done in this wise, and is, by the way, the only

proper mode for the flower-garden. Set the pot right side up close by the plant, and press it firmly down so as to fill the hole at the bottom with earth, then fill with water, which will ooze so slowly through as to be readily drunk by the earth, thus avoiding a puddle, which, on subsiding, leaves a crust to shut out air and light. Refilling once or twice will overcome the severest drought. Wash the foliage with a syringe, if you will, but never pour water faster than a gentle shower gives it, if you would not injure your plants. We retain in the bed such plants as we wish to keep together in pots, or plant it with vines, or use it as we will until "pay day," when we take out and save the tan, and also a little of the rotted manure, which now resembles in appearance a mixture of the best of loam and peat. The sashes and frame were housed long since, and we "pay off," by giving to our shrubs, herbaceous perennials, bulbs, &c., each its share of the "fatness" to protect it through the long winter, and when raked down in the spring, and forked in, to nourish it in its future growth. This whole system is recommended for its simplicity, and the ease and lightness of its operations. After the bed is once made, the whole work may be carried through, to planting out, by the most delicate ladies, or young children, even, with a little direction from the more experienced. It also enables us to take the advantage of time, and avoid the great haste otherwise consequent upon the commencement of gardening operations, thus accomplishing more within the season, with more leisure wherein to enjoy the fruits of our labor.

REMARKS.—Our correspondent is enthusiastic, and we relish it greatly. We like enthusiastic people. We could almost forgive a scamp for fleecing us, if he did it with a will, as though he found pleasure in it. But a see-saw, poke-and-go sort of a person, one who never sang,

"Git out of the way, ole Dan Tucker,"

reminds us of an excellent horse we have—excellent in every thing but one—he insists upon going to sleep in the harness, and tumbling down with us occasionally! But we only meant to say that the uses of a hot-bed, so enthusiastically described, are just as valuable in starting our tomatoes, radishes, cucumbers, peppers, egg plants, &c., as they are for flowers. The small hot-bed which is illustrated, has its sides constructed of masonry, and is more substantial and costly than is necessary for the use of a common farmer, or single family.

THE IRON RULE.—Never borrow a paper, book, umbrella, horse, cart, plow, shovel, spade, pickax, chain, or anything else whatever, if you can possibly do without it, nor then either unless with consent of the owner.

THE SILVER RULE.—Not only use the article borrowed as carefully as if it were your own, but more so, for it is not your own,—nor retain it beyond the time agreed to, without the owner's verbal consent.

THE GOLDEN RULE.—As soon as you have done using the thing borrowed, return it with thanks, and be ready to return the favor.

For the New England Farmer.

COMPLAINTS OF HIGH PRICES.

MR. EDITOR:—A mistaken notion prevails very extensively among the mechanics and laboring classes respecting the effect of high and low prices of provisions upon them, pecuniarily. It is a stereotype complaint with them that it costs so much to live, they can scarce maintain themselves and families; or, that prices of provision are so high it is impossible for them to get forehanded, &c., &c. All such assertions, or notions, are based upon the erroneous idea that if provisions were cheap their wages would still remain the same. This can never be in the nature of the case. The cost of production and the price of the product necessarily go hand in hand. They as necessarily find their level as water. I can well remember when the carpenter in the country worked from sun to sun, and even longer, for a day's work, and was content to receive his dollar for the same. I know of many who then could live as well as country communities usually did, and get forehanded in property. When I was a boy, farm laborers were paid from eight to eleven dollars a month, according to qualifications. In haying time, daily wages were from seventy-five cents to a dollar. This was the case for several years, as many now living can testify. Provisions, of course, were low, as a general thing: northern corn rarely a dollar a bushel, butter and cheese quite low most of the time—yet still, all farm products, as compared with price of labor, were higher than at present.

How, then, are we to account for the almost universal complaint of our mechanics and laborers of having a hard time to get on?

I think none will deny that most of them do have a hard time—but is it necessarily so? I think it is not, and will try to make it appear. We will look at the case of the mechanic. The evil commences with him at the very outset of his apprenticeship. As the hours for labor are now regulated, he has much time at his own disposal. How it is disposed of few need to be informed. That a majority of them fail to make a good use of it, few will gainsay. Formerly, the master, or employer, felt himself under obligation to see that his apprentice contracted no bad habits, formed no bad acquaintances, and conducted himself worthily on all occasions. Lamentably is this now neglected, to the ruin of many a promising youth. The boss don't care to have this trouble, and the weak, injudicious parent fails to require it of him, so that between them both the boy is left pretty much to his own course, unguided by wise counsel, unrestrained by judicious command. He associates with whom he will, goes where he will, and contracts such habits as he will, little dreaming of the bitter fruit which in the end such unrestrained license is sure to produce. He is almost sure to contract the use of tobacco in some form, and if he escapes the use of intoxicating drinks, it is a marvel.

If by any means he has money to use, it is usually quickly gone for some needless recreation, amusement or extravagance. He has no idea of its value and wise use. It is more than probable that by the time he arrives at maturity his cigars and other needless expenditures will amount to nearly or quite as much as many expend on their board. This may be an extreme case, and no doubt

is of rare occurrence, but that it does occur, many can vouch. Let us suppose the outlay for cigars and other needless expenses to amount to only twenty dollars per annum, (which is doubtless less than the real amount generally worse than thrown away, by a majority of apprentices and journeymen from sixteen to thirty, or for a period of fourteen years,) with interest added annually, and see if it does not give us a sum that most of our mechanics would be proud to possess.

What I have said in reference to mechanics, applies in a greater or less degree to other occupations. All complain, but I think the fault is generally to be ascribed to the grumbler himself. Suppose these classes gave their spare time to useful study and reading, thus acquiring information that in future life may be drawn upon for profit and pleasure, would they not, of course, husband their earnings, and more economically manage their affairs? Would not such a use of leisure hours operate as the great balance wheel of all their actions, leading them on to thrift and respectability?

Allow me to say to all of you of this class who chance to read these thoughts, that finding fault with the prices of food and the dullness of the times, will do you no good; prices, for all this, will remain the same and the times unaltered. Seek for the remedy within yourselves. Stop every leak, cut off every useless and needless expenditure, appropriate every spare hour to some useful employment, and you will be surprised at the result. You will find more money in your purse, a happier heart in your bosom. The clouds that heretofore have enveloped you will quickly disperse, and cheerful sunshine will illumine your future; contentment and hope will be your constant guests; your households will rejoice with you, and peace will surround your hearthstone.

The prices of provisions and the compensation for labor are entirely beyond our control, and it is useless for us to attempt it. They are governed by circumstances and laws that cannot, in the nature of things, be abrogated.

O. K.

Rochester, Dec., 1861.

For the New England Farmer.

HOME SYMPATHY.

A young lady, a farmer's daughter, was asked a few days ago, "how large a dairy has your father this winter?" Her answer was, "How should I know? I don't go to the barn once a month."

Beecher says that "no one can learn patience except by going out to battle in the hurly-burly world." Perhaps so; yet nowhere in the "hurly-burly world" are there so numberless occasions for practicing patience, as in the quietude of home. And among these home trials, not one is more keen than the want of sympathy in your life-work from those around you. Buttonless shirts, and ventilated stockings, and late dinners, are very good patience teachers. But what can irritate a man more than when he sits down to explain to his wife and girls his pet plan for a perfect garden or orchard, or the additions and improvements which he intends to make to the barn, to see them listen with a martyr-like air of meek endurance, or turn away to commend Mrs. Grundy's taste in dressing her children!

Farm-houses would not have the barren all-for-

use appearance which they now so often present if farmers received due in-door sympathy. Boys would not consider farming as coarse and undignified labor, and hasten off to the city, if sisters worked "heart and hand" with them, and would not speak with such evident pride of the brother who is in college, or clerk in some city store. And young ladies, your pretty white fingers would touch the piano keys just as gracefully, and crochet and embroider just as skilfully, were they in the habit of giving the cows a daily loving pat, or a handful of hay. And you would lose none of your refinement, were you so well acquainted at the barn, that the horse would greet you with a good-morning neigh, and the busy fowls flock about you as you enter; or if you were able to inform inquirers whether or not your father "cut the feed" for his cattle, or whether in the summer he "turned them out to pasture," or "soiled" them.

You enjoy sympathy; why not *give* then, as you wish to *receive*?

HOWARD.

Dec. 18, 1861.

FROST IN THE WINDOW.

Books have been written of painted windows, and journeys long and expensive have been made to see them. And without a doubt they are both curious and more than curious; they are admirable. One such work of art standing through generations of men, and making countless hearts glad with its beauty, is a treasure for which any community may be grateful.

But are we so destitute of decorated windows as at first one might suppose? Last night the thermometer sank nearly to zero, and see what business Nature has on hand! Every pane of glass is etched and figured as never Moorish artist decorated Alhambra. Will you pass it unexamined simply because it cost you nothing—because it is, this morning, the property of so many in common—because it was wrought by nature, and not by man? Do not do so. Learn rather to enjoy it for its own elegance, and for God's sake, who gave to frosts such artist tendencies.

The children are wiser than their elders. They are already at the window, interpreting these mysterious pictures. One has discovered a silent, solitary lake, extremely beautiful, among stately, white cliffs. Another points out a forest of white fir trees and pines growing in rugged grandeur. There are in succession discovered mountains, valleys, cities of glorious structures, a little confused in their outline by distance. There are various beasts, too. Here a bear coming down to the water; birds in flocks, or sitting voiceless and solitary. There are rivers flowing through plains; and elephants, and buffaloes, and herds of cattle. There are dogs and serpents, trees and horses, ships and men. Besides all these phantom creatures, there are shadowy ornaments of every degree and beauty, simple or complicated, running through the whole scale, from a mere dash of the artist's tool to the most studied and elaborate compositions.

Neither does frost repeat itself. Every window has its separate design. Every pane of glass is individual and peculiar. You see only one appearance of anxiety in the artist, and that, lest time and room should fail for the expression of the endless imaginations which throng his fertile soil.

There is a generous disregard of all fictitious or natural distinctness of society in this beautiful working. The designs upon the poor-house windows are just as exquisite as any upon the rich man's mansion. The little child's bed-room window is just as carefully handled as the proudest window in any room of state. The church can boast of nothing better than the emblazonings on the window of the poor seamstress who lives just by. For a few hours everybody is rich. Every man owns pictures and galleries of pictures.

But then comes the iconoclast—the sun! Ah, remorseless eye! why will you gaze out all these exquisite figures and lines? Art thou jealous lest night shall make sweeter flowers in the winter than thou canst make in all the summer time? For shame, envious Father of Flowers! There is no end of thy abundance. Around the equator the summer never dies; flowers perfume the whole ecliptic. And spreading out thence, the summer shall travel northward, and for full eight months thou hast the temperate zones in thy portfolio. Will not all the flowers of the tropics and of eight-month zones suffice? Will not all the myriads that hide under leaves, that climb up for air to tree-tops that nestle in rock crevices, or sheet the open plains with wild effulgence, that ruffle the rocks and cover out of sight all rude and homely things—suffice thy heart, that thou must come and rob from our winter canvass all the fine things, the rootless trees, the flowers that blossom without growing, the wilderness of pale shrubberies that grow at night and die by day? Rapacious sun, thou shouldst set us a better example.

But the indefatigable frost repairs the desolation. New pictures supply the waste ones. New cathedrals, new forests, fringed and blossoming, new sceneries and new races of extinct animals. We are rich every morning, and poor every noon. One day with us measures the peace of two hundred years in kingdoms—a hundred years to build up, and a hundred years to decay and destroy; twelve hours to overspread the evanescent pane with glorious beauty, and twelve to extract and dissipate the pictures!

How is the frost-picturing like fancy painting! Thus we fill the vagrant hours with innumerable designs, and paint visions upon the visionless sphere of time, which, with every revolution, destroys our work, restoring it back to the realm of waste phantasies!

But is not this a type of finer things than ardent fictions? Is it not a mournful vision of many a virtuous youth, overlaid with every device of virtue which parental care could lay on, dissolved before the hot breath of love, blurred and quite rubbed out!

Or, shall we read a lesson for a too unpractical mind, full of airy theories and dainty plans of exquisite good, that lie upon the surface of the mind, fair indeed, till touched? The first attempt at realization is as an artist tries to tool these frosted sketches, the most exquisite touch of ripe skill would mar and destroy them!

Or, rather, shall we not reverently and rejoicingly behold in these morning pictures, wrought without color, and kissed upon the window by the cold lips of winter, another instance of that Divine beneficence of beauty which suffuses the heavens, clothes the earth, and royally decorates the months, and sends them forth through all

hours, all seasons, all latitudes, to fill the earth with joy, pure as the Great Heart from which it had its birth?—*The Independent*.

THE RIGHTS OF THE FARMER.

What gives our country strength in this day of her peril, and what holds in check the nations who desire to procure cotton from the South, is the abundance of our farm products, by which we supply not only ourselves at home and our armies in the field, but have a vast surplus which England and France need and must have. They can do better without our cotton than they can without our corn, and so we have some security that they will not at present interfere in our family discipline of the refractory states.

Manufactures are important, and to be cherished at all times, but there is a market where we can supply ourselves with clothing and arms, even, if unable to manufacture all we need, while there is no country in the world from which we could obtain bread enough to sustain our army for a single month.

The legislation of Massachusetts has been always partial to manufactures; and the rights of the farmer and the interests of agriculture have often been sacrificed or put aside at the demand of the factory companies, not because of any wrongful intention, but because the manufacturers are wealthy, and united in their movements, and the farmers, individually, are scattered, so that they have no concert of action.

FLOWAGE.

The best lands of the State have been converted into mill-ponds, under the Mill Act, or Flowage Act, and it is even now lawful for any mill-owner to raise his dam without notice, and overflow as much land as he pleases. The only remedy of the land-owner is by petitioning the courts for redress. This is a disgrace to the Commonwealth, and should be changed forthwith, so that no dam shall be raised until after the land-owners have had notice and the court have by a judgment authorized the flowage. We admit that private property should be taken when the public good requires it, but let it be done as in the case of land taken for highways after the land-owners have been fairly heard and paid. We rejoice to see that our patriotic Governor has, in his recent message, called attention to this subject, and trust the members of the Legislature will give heed to his words of wisdom, which we quote.

The subject of flowing our low lands and meadows under the operation of the "Mill Act," has also engaged the attention of the Board of Agriculture. Rights already acquired thereunder are not subject to disturbance by its modification or repeal, but in the belief that the act has long outlived its

usefulness, I respectfully recommend its consideration to the Legislature.

The tendency of thrift, economy and sound policy is toward general and systematic drainage, not toward the drowning of the most valuable lands. Rude and poor farming is the usual lot of pioneers. It was true of those of New England. They gradually moved down from the more barren hill-tops to the meadows and richer lands, where capital and labor, wisely expended, are at first absolutely needed, but where the ultimate return is large and ample.

In this connection I desire also to call the attention of the Legislature to a measure of justice and public utility which will restore to cultivation many acres of the richest and most productive lands in the State. There are in nearly every section of the Commonwealth, ancient mill privileges under which the right exists, and has existed since the first settlement of the country, to flow back upon the lands adjacent to the streams which supply them. Many of these privileges are neglected, and have been unused for years, but still the dams remain, rendering all attempts to redeem for cultivation the lands above, of no avail. There should certainly be some limit to the period when exclusive rights, originally conferred upon individuals for the common good, and which, under the changed circumstances of the present time, serve only as instrumentalities of oppression, and to retard the development of enterprise in the cultivation of the soil, should again revert to those proprietors of lands by whom they were originally yielded. Whether provision should not be made by statute limitation as to the time when all such unused and neglected mill-privileges should become invalid, is worthy of your consideration.

We know how these wise suggestions of Gov. Andrew will be met. The farmers will be told that the mills are now making clothing for the army, and their water-power must not be disturbed. Our answer is, food is as important as clothing, and it can only grow on our own soil, while mills can run by steam as well as by water, and so we may increase our food and not diminish our manufactures.

THE SUDBURY MEADOWS.

The Governor calls attention to this subject, and we trust the rights of agriculture are not to be further sacrificed by any new schemes of the mill-owners on the Concord River.

By an Act of 1860, an act of strict though tardy justice, a board of commissioners were authorized to remove thirty-three inches of the dam at Billerica. This act has been declared by the Supreme Court to be constitutional. Under its operations, the commissioners removed the flash-boards from the dam. At the General Court in 1861, the mill-owners demanded a new examination, insisting that the dam formed no obstruction to the water. The meadow-owners opposed this as a useless expense and delay, but a law was passed to stay the operation of the act of 1860, one year, and a new board of scientific commissioners was appointed to report as to the extent of the flowage and the effect

of the dam. Their report is not yet published, but they have stated their conclusions to the counsel, on each side, and we know something of the result.

Their conclusions will be found to sustain the positions for which the land-owners have always contended, which may be briefly stated thus.

1. While the dam stands, the meadows can never be effectually improved.

2. By removing thirty-three inches of the dam, and reasonable improvements of the channel, the meadows may be made dry enough for cultivation.

We hear that the mill-owners are everywhere proclaiming that the commissioners have reported in their favor, and insisting, because the water did not all run out of the river, when the dam was opened, that removing the dam will do no good to the land-owners. We call the attention of candid readers to the following extract from the printed argument of Judge French, before the Joint Committee last year. It shows what the land-owners then claimed, and we have no fear that the report of the commissioners will conflict with his positions. It was admitted that the river was full of bars which had formed, in part, through the operation of the dam, as bars always form by deposits above a dam. It was admitted that weeds were growing all along, which must be cleared out, in order to allow free passage for the water. Nobody expected the water to run off so as to effectually relieve the meadows, without some labor on the part of the owners.

The dam prevents any improvements. Being higher than anything else in the river for twenty-one miles, if every bar was cut out, and the channel made into a canal, the water must remain higher than any of the bars.

The land-owners expect and desire to improve the channel, which is rapidly filling up with weeds and deposits of sand and mud. Formerly they could do this to some extent. Of late years the greater height of water has prevented, and unless the dam is reduced, their case will grow worse and worse. With the great increase of water and the obstructed channel, and this dam higher than any other object in the whole river, their condition is hopeless. *Reduce the dam thirty-three inches, the water will fall proportionably on all these bars, which may then be cut out, and the river may be brought and kept within its banks in the growing season.*

In the report, at pp. 207-8, "Mr. Chase asked if there was any practical difficulty in regard to the removal of the natural obstructions in the stream, bars, &c. Mr. Butler replied in the negative."

Mr. Francis, their expert, fully supports our view of this matter. He says:

"If the fall is now four feet in the twenty-two miles, taking out the bars might reduce it two feet, or even more. It might be dug down so that the water could be kept in between the banks, like a canal, except in times of extraordinary freshets,"—p. 256. He says again: "If the forway

were blasted out, the dam standing as now, it would make a little relief in certain stages of the river, but I think no substantial and general relief would follow. *I think removing the dam, the forway and bars would produce a material effect, but not the removal of the dam alone.*"

What the land-owners then asked, was that the act of 1860 should go into operation, and the dam be reduced thirty-three inches for one year. Then, if, by clearing out the channel, the water did not go off, the dam could be restored. If it did no good to the meadows to remove it, it would do them no harm to restore it, and nobody would object. But this would not satisfy the mill-owners, and against all protests by the land-owners, they procured their stay act, and a new commission, and after putting the Commonwealth to an expense, as we hear, of nearly twenty thousand dollars, they will probably renew their attempt to prevent this most beneficent act of 1860, by which a part of the dam was condemned as a public nuisance, from going into effect, and to continue this water-course and this controversy, with its enormous expenses, for generations yet to come.

GRAFTING THE GRAPE VINE.

My experience in grafting the vine for several years would furnish a chapter of failures. I think I grafted a few vines every season for about five years, and during the whole time succeeded in making but one grow and form a good vine; and this one only by disregarding the usual direction given by the professed experts. Instead of waiting for the formation of leaves, and discontinuance of the excessive flow of sap, I grafted this one early, before the flow commenced. Since that time I have grafted thousands of vines, with nearly as good success as attends any other kind of grafting. I have practiced saddle-grafting, whip grafting, and several fancy methods, but have found the common cleft grafting, carefully performed, the most reliable and successful. For large, strong stocks, I hardly think tying necessary, though a covering of clay or grafting wax is undoubtedly beneficial. For smaller stocks, I use only paper covered with grafting wax on one side. I could not recommend copper wire in any case. I have also grafted on various stocks, with very little difference in result using indiscriminately the wild frost grape of the woods, the Catawba, Isabella, Concord and some others. I do not say grafting the vine cannot be successfully performed after the leaves have formed; but it is a fact that up to the present time, notwithstanding many trials, I have never succeeded in doing it.—*Horticulturist.*

AMERICAN PLOWS.—A correspondent of the London *Mark-Lane Express* says: "The Americans have driven our plow-makers out of the Australian, Indian and Colonial markets, by their lighter and cheaper articles. Unless our makers bestir themselves here, by using steel instead of heavy castings, they will be likely to be 'beaten on their own ground.'"

For the New England Farmer.

SAWDUST AS A FERTILIZER AND ABSORBENT.

In a previous article I promised to say something of my experience in using sawdust as a fertilizer and absorbent; and as the time of year I commenced drawing sawdust is approaching, and hoping that a plain statement of facts may induce others to commence with sleighing as I did, I will pen them for the benefit of the readers of the *Farmer*.

On the 1st of January, 1859, I commenced hauling sawdust and fine chips, made in the manufactory of clothes pins from white birch and swirl leaf poplar, to the farm at the Green Mountain Hermitage, Sunderland, Vt., and I had any amount of prejudice to combat with.

Many of the old farmers in our neighborhood told my father I would spoil his farm. Some even said they had tried to use sawdust as a fertilizer, and spoiled their land with it, &c.; but I was an unbeliever, and persisted in drawing it home. I had sustained loss in some manure by fire-fanging before I learned how to use it.

I averaged hauling half a cord per day for nine months, and it was a nine months' wonder what I was doing and going to do, with so much nonsense.

There were two horses, seven head of cattle and several swine on the farm, and I managed to use 100 cords in the nine months as bedding—in this way.

I put the sawdust on the floors about six inches thick, and as fast as it was saturated with urine, shoved the cattle and hogs' bedding into the manure vault, together with the manure, trampling it as hard as possible, and the horse bedding and manure under a shed. I soon found it must be turned or something else done with it to keep it from fire-fanging.

After trying various plans, I found the best was to run water on it—enough to keep it moist and cool—and let it remain in as solid a body as possible until I drew it out, and then put it in flat heaps, two or three cords in a heap, and a foot thick after it was well trod down. I put some light meadow mud, (black earth,) behind the cows, and the sawdust under them some of the time.

I put a pair of steers into a yard nights (14 ft. square) for two months, in the fall of 1859; throwing sawdust under them three times a week, one-third of a cord at a time. This lay until the spring of 1860, when my father took out 4 cords No. 1 manure. There was but little loss in bulk by decomposition, and he calculated it was one-fourth heavier than the four cords green sawdust put into the yard. There was a good deal of rain fell in the two months—fall rains.

The chips and sawdust that we could not work under our cattle for bedding, we piled up in the barn-yard and various places, in flat piles, as before stated. In September, 1861, I was at the hermitage, and found those heaps that were the innocent cause of so much gossip when put there in 1859, were getting to be valuable manure, and had settled but little. There is but little danger of getting on too much water. If it does not run out from under the heap, never fear.

The solid manure has all got to become a liquid or gas before the vegetable can be benefited by it

in any way, and sawdust has a marvellous faculty of holding on to liquids and gases. I never smelt a disagreeable odor around our stables, while using the sawdust, only when it burned, (and physiognomists tell me I have a chemical nose,) and never saw any liquid leaching out from under our heaps on a clayed bottom, though we used water plentifully, often running on two barrels to a cord at a time. Used troughs with holes bored through the bottom to run the water on with, and run most of it from barn and shed eaves troughs.

I drew the sawdust a mile with one horse, and averaged an hour and a half to half a cord, drawing and distributing, trampling, watering, &c. We had from 80 to 100 cords of No. 2 manure made in 1859, aside from what is lying around that will be good in 1862—say 50 cords No. 2. This same stock in 1858 made about 15 cords No. 1 manure that was saved. The cattle were bedded in the common way, with straw, oats, &c., very sparingly, which I used in 1859. It was worth at least as much again as manure thrown out of a window to bleach and wash in the sun and rain. I also used what was made from the 1st of January to the 1st of April, 1859, from sawdust—some 30 cords—so had a good chance to experiment.

We put the manure side by side on various crops and various soils. Plowed it in; used it as a top-dressing on plowed land and grass land, and for that year there was no perceivable difference except on dry land, where the sawdust manure was best. I ought to say sawdust and manure, for the sawdust had not changed much, only where it had burned, and was not worth one-half as much, except as a top-dressing for grass land, as it was after it had lain over the summer and digested.

The next year, 1860, Old America was a little ahead, lasted a little the best, where plowed in, but only a little. On a cobble stone knoll of about one acre, where the grass was run out, and hardly worth the cutting in 1859, in the fall I drew about eight cords of sawdust manure and left it in heaps till the spring of 1860, when it was spread. I had spread half an inch thick, and so down to a mere sprinkling. It spoke for itself immediately, and the largest crowd spoke loudest. The grass on it was good in 1860, and after giving the thinnest sprinkled part another sprinkling after the grass was off, it was all very good in 1861. Cut one and a half tons No. 1 hay.

I put four cords of the same kind of manure on to one-half acre of land too stony to plow, and at the same time sowed ten bushels of oyster shell lime under it. On this piece the hay crop was doubled in 1860, and quadrupled in 1861. I have found sawdust manure operates as well on all crops as this—but except on grass land, would plow it under.

I manured thirty-two rods of worn-out sward land with three cords of sawdust manure in 1859. Plowed in one and a half cords first week in April, and one and a-half first week in May; broke it nine inches deep, and plowed it second time two inches. Sowed carrots 22d May, and when they came up sowed three bushels lime. First week in November we dug 160 bushels nice carrots; in 1860, 13 bushels shelled corn was raised on the bed without more manure, and in 1861 my father put on two cords sawdust manure and one bushel leached wood ashes, and took off 16 bushels shelled corn—New Hampshire twelve-rowed. Had a piece of

potatoes this year, on dry sandy land, manured with sawdust manure, and the more sawdust the more potatoes, as everything else. Don't know where the increase might end, but am convinced that such manure will raise most soils to a very high state of cultivation.

Had half an acre of Java wheat this year, the first that has been raised in this section. The soil had been fertilized with sawdust manure, receiving this year—after the wheat was up—a top-dressing of five bushels of wood ashes saturated with urine, and left four weeks to digest. It yielded 12 bushels, and had it not been for the tadpole, would have been 20.

I can hardly tell the greatest advantage arising from using sawdust and fine chips, leaves and other vegetable matter, as litter, for our stables and to compost—that is lying all about the country, and much of it contaminating air and water that would otherwise be pure and wholesome for man and beast to breathe and drink.

Wherever I have examined the roots of a vegetable grown where sawdust, chip or leaves and stable manure had been used, I found them embracing with their delicate fibres every atom of the vegetable matter within their reach, and drawing their natural sustenance from them; and there is nothing I have ever tried as an assistant fertilizer that holds so much liquid or retains it so long, where only the air and sun operate on it, as hard wood sawdust; and nothing that yields up this embryonic vegetable so readily to the petitions of the rootlets.

There is much difference in sawdust, and I would make three qualities of sawdust or leaves as fertilizers, and therefore three qualities of muck that is formed from decayed forest vegetables.

- 1st quality.....hard wood, hickory, oak, maple, &c.
- 2d quality.....poplar, basswood, chestnut, &c.
- 3d quality.....spruce, hemlock, pine, &c.

Wayland, Mass.

F. J. KINNEY.

For the New England Farmer.

RANDOM NOTES.

Fine Colts—Effects of the Mild Autumn Weather upon Vegetation—Farmers and Science.

MR. EDITOR:—The remarks of "S. D.," of Bolton, Vt., in the *Farmer* of Dec. 7th, I have just met with respecting some fine colts of his. One he speaks of as weighing 923 pounds, at one year and five months old, and the other at the same age, 773 pounds. The first he thinks is hard to be beat, which is undoubtedly true; but two colts of about the same age in this vicinity, (raised and owned by the writer's father,) that are considered by good judges to be very large and fine, I may perhaps be allowed to mention, as they also have been favored with but ordinary keeping. One is one year and five months old, (sired by the "Kennebunk Chief") the other, one year and six months, and a short time since weighed 880 pounds each, and what is a little singular, both weighed in the same notch, not even half a pound of difference being perceived between them. The aggregate weight of "S. D.'s" colts is 1696 pounds; the weight of these, 1740 pounds. They are both horse colts, finely built, and "good looking."

The unusually warm weather of the past autumn seems to have had a peculiar influence upon

vegetation, and in some instances apparently quite injurious. Besides the late blooming of violets in the gardens, and the untimely flowering of strawberries and many wild flowers, its forcing influence is quite as apparent, though doubtless less observed, upon the buds of the trees, especially of the forest shrubs and trees; and I fear will be too apparent, when spring returns, upon the buds and late growth of our fruit trees. During the first and second weeks of November, in my excursions in the woods and fields, I frequently met with buds swollen to bursting, and occasionally expanded into leaves, in consequence of the exceedingly and uniformly warm weather of October. On the shrub commonly known as the shadberry, (*Amelanchier Canadensis*;) it was not uncommon to find young, tender leaves an inch or an inch and a half in length, evidently having lost their reckoning, and mistaken the first of November for the first of May; the birches occasionally exhibited the same phenomenon. The buds of the common walnut, were generally larger than I ever saw them before at this season; and I observed several instances where they were opening into leaves; while the buds of oaks, maples, and various wild forest shrubs were very much swollen.

The scales that are produced during the autumn as an outside covering to the buds, for their protection during the varying temperatures of winter and spring, were often, and I think generally, sparingly developed this fall, and in cases where the young leaves were thus untimely developed they were scarcely formed at all. From the late continued activity of the sap, it would appear that even our fruit trees are less prepared for the blasts of winter than usual, and should the present winter prove a trying one, it is possible that the stimulating effects of our mild autumn upon the vegetable world may be sadly apparent in the fruit crop another season.

Even in December there have been several days in succession without frost. But now the winter seems to have commenced in earnest. The storm of rain and snow that occurred two days since has left the trees loaded heavily with ice, and a good foundation of snow and ice on the ground for sleighing. And this Christmas morning the mercury has settled down to the zero point; the bells jingle merrily as the sleighs go creaking by over the frozen snow, the forest pines look dark and gloomy, their heads bowed under the great weight of ice; the old nor'wester has assumed his wonted wintry sway; and we can but realize that winter has at last assumed his regal functions. The weight of ice now upon the trees is very great; the pliant birches are bowed to the ground, and generally the trees are bending beneath the burden.

I am glad to see your correspondents calling the attention of farmers, young and old, to the importance of some knowledge of the natural sciences. To the farmer, not only in a practical point of view, which is of itself a sufficient reward for any amount of attention that may be bestowed upon them, but as a source of enjoyment ever present, delightful and ennobling, they merit study and attention. Many shrink from the task as one of so much labor, and possibly so dry, when if they would but devote these long winter evenings to a thorough course of reading even, on one or more branches of science, as agricultural chemis-

try or botany, they would soon, I doubt not, almost invariably, become deeply interested in the subject, and pursue the study as a pastime, and surprise themselves with the advancement they would make, and the fund of knowledge they would find themselves in possession of at the end of a few months. Let none be discouraged at the sight of a few hard names; they soon become familiar and convenient terms. But in the *Farmer* of Dec. 14th, Mr. BASSETT has made further remarks unnecessary; he has stated the matter in its true light, and what he has said is in no point exaggerated.

J. A. A.

Springfield, Dec. 25, 1861.

For the New England Farmer.

WAYSIDE NOTES.

Cutting down Trees—Rural Lanes—Birds—Climate—Weather—Grunblers—Change Essential to our Happiness.

In renewing my subscription to the *Farmer*, I am tempted to send you a few wayside notes on rural matters.

I am sorry to see our farmers cutting down the old apple trees around their houses, and mowing or grubbing up the bushes along the lines of their fences and lanes. Doubtless this is, in many instances, desirable, in the march of agricultural improvement; yet how often have I seen with regret the charm of a pleasant rustic place destroyed, while its productiveness was in no wise increased, by an indiscriminate sacrifice of every tree and shrub that did not bear dollars. On many of our New England farms are charming rural lanes, winding about in the most picturesque manner, and skirted on either side of the cart path, next to the wall or fence, with an irregular hedge-row of oaks, birches, pitch pines, savins, barberry bushes, wild cherry trees, &c. But too often the owner, in his blind zeal for improvement, cuts down these beautiful hedge rows, thereby destroying the rustic beauty of his farm. Thus the old-fashioned farmer banishes the birds from around his homestead.

Speaking of the birds, can you tell us, Mr. Editor, when we are to have the new Ornithology which we heard of so long ago as being in progress by Dr. Brewer? You may search our book-stores in vain for a copy of Wilson or Nuttall. They were long ago out of print. My thanks to your correspondent, J. A. A., for his interesting papers on the Birds of New England.

Every year I find myself better satisfied with our New England climate. I do not think we have any more winter than we need to make out an agreeable variety. Certainly, no weather in this world can be finer than our autumn, with all those quiet, hazy, golden days. The Indian summer lingers into December, and then we are ready for snow and the beautiful scenery of winter: the season of comparative leisure, of long evenings by the fireside and lectures and social gatherings; and before we are tired of sleighing, we awake some morning to hear the robin in the garden telling us spring is coming. I remember one winter when our ponds did not freeze to their usual thickness for the ice men to cut, and so that crop was a failure, though corn never failed in the summer. And yet, I am sorry to hear our people sometimes complain of the winters. To such I am accustomed to recommend a perusal of Dr. Kane.

Though some, indeed, seem to make it a point to find something uncommon, unprecedented, and exceedingly uncomfortable in every change of the weather, as though they could have devised a much better arrangement. My busy neighbor complains of the short days, as if the long, delicious sleep of winter nights was of no account, and he would have it all *day-time*, if he could.

Nevertheless, I confess to an especial fondness for summer, though I cannot say I am, on the whole, any happier or any surer of happiness in summer than in winter. On the contrary, I am accustomed to regard the exuberance of spirits which most persons experience in the clear, sparkling days of winter, as a kind of compensation for the loss of summer's verdure. We are wont to dream sometimes of endless summer and ever smiling faces, forgetting that changes are essential to our happiness. We cannot clutch all of beauty or pleasure at a grasp, and therein lies the charm. When our cup of happiness is full it begins to run over. We scorn common things, yet when they grow rare we prize them. I have fancied that the dandelion was once the choicest flower, when first I have seen its bright face looking up from a soft green bed of the freshest spring grass. But I did not set out to write an essay.

Plymouth, 1862.

J. W. S.

REMARKS.—We like the cheerful views of life and beauty, and the pleasant manner in which they are expressed. How can the writer gladden the hearts of thousands in any easier way, than by writing again? We cannot inform "J. W. S." when the new work on Ornithology will appear.

ROUGH NOTES ON MILKING.

The first process in the operation of milking, is to "fondle" with the cow—make her acquaintance, and thus give her to understand that the man, or "maid with the milking pail," approaches her with friendly intentions in order to relieve her of the usual amount of lacteal secretion. It will never do to approach the animal with combative feelings and intentions; should the milker swear, scold, or kick, and otherwise abuse the cow, she may probably prove as refractory as a mule, and may give the uncouth and unfeeling milker the benefit of her heels—a very pertinent reward, to which he, the uncouth milker, is justly entitled.

Before commencing to milk, a cow should be fed, or have some kind of fodder offered her, in view of diverting her attention from the otherwise painful operation of milking; by this means the milk is not "held up," as the saying is, but is yielded freely.

The milker should be in close contact with the cow's body, for in this position, if she attempts to kick him, he gets nothing more than a "push," whereas, if he sits off at a distance, the cow has an opportunity to inflict a severe blow whenever she feels disposed to do so.

Before commencing to milk a cow, the teats should be washed with water, warm or cold, according to the temperature of the atmosphere, the object of which is to remove filth which might otherwise fall into the milk-pail, to the disgust of persons who love pure milk, and hate uncleanness.

Milkers of cows should understand the udder and teats are highly organized, and consequently very sensitive, and these facts should be taken into consideration by amateur milkers, especially when their first essay is made on a young animal after the advent of her first impregnation; at this period the hard tugging and squeezing which many "dumb brutes" have to submit to, in consequence of the application of hard-fisted and callous fingers, is a barbarity of the very worst kind, for it often converts a docile creature into a state of viciousness, from which condition she may not easily be weaned.—*Exchange.*

For the New England Farmer.

COE'S SUPERPHOSPHATE OF LIME.

After having read in the *Farmer* of Dec. 21 friend White's statements in relation to Coe's superphosphate of lime, I concluded I would give you, and the readers of the *Farmer*, a short account of my own experience with it. One year ago, this fall, I plowed up about one acre and a half of an old mowing field which was pretty much bound out, as the saying is. The next spring I carted on fifteen horse cart-loads of stable manure and spread it evenly over the whole piece. I then took my horse and plow and cross-cut it about four inches deep, in order to cover the manure, which I think is a much better way than it is to undertake to do it with a harrow. I then harrowed smoothly, and commenced on one side of the piece with my hoe, and opened rows $3\frac{1}{2}$ feet apart with the hills 3 feet apart, which I think is the right distance for corn. On the first eight rows I put about one pint of night soil and loam mixed to each hill; I then left one row without any fertilizer whatever; in the next row I put one small tablespoonful of Coe's superphosphate of lime in each hill; on the next row I put a handful of compost, made of equal parts of lime, leached ashes and plaster, and a very little salt, in each hill. I then commenced again with the phosphate, using a spoonful to each hill, until I used three bags, which nearly completed my piece, which was finished with unleached ashes in the hill.

Now for the result:—The corn where the night-soil and phosphate was put came up pretty well, also the compost row; the row without the fertilizer was two or three days longer in getting up, and after it got up, it looked as though it did not know which way to go; in fact, it did not go much any way, it looked as though it was planted in the dead furrow,—but that was not the case,—the land there was as good as anywhere on the piece. When the corn was fit to harvest I cut up the three rows first described, husked and weighed the corn from each row, with the following result: The row without any fertilizer had 21 pounds of corn, about one-half of which was unsound; the phosphate row had 84 pounds, about all of it sound; the compost row had 72 pounds, mostly sound.

I would here state that the worms injured my corn somewhat, though less where the night-soil was put than anywhere else, and very much worse in the row where there was nothing, than elsewhere. It has been claimed by some, I believe, that worms would not work where there was phosphate, but that is a mistake; for I found them

right in among it. But notwithstanding the worms I had a good piece of corn. Where the night-soil was, the corn was as good, or better, than on any other part of the piece.

I am perfectly satisfied with my experimenting, and have come to the conclusion that any man who has got to buy fertilizers will do better to purchase Coe's superphosphate of lime than anything else.

I would here state, that on a part of the piece, I covered the phosphate up before dropping the corn, and on the other part I dropped the corn right on to the phosphate, but could see no difference in the result. Both came up well, and grew after it came up.

I think phosphate, for squashes, is excellent, as I raised about a cart-load right amongst my corn, the same as many people raise pumpkins. I planted squashes amongst my corn in order to get rid of the stinking black bug, which I did most effectually. I will close this article by joining with friend White in requesting that others who have tried Coe's superphosphate should give the results in the *Farmer*.
GEORGE MORRISON.

Franklin, N. H., Dec. 28, 1861.

REMARKS.—We are glad to get accounts of such thorough experiments as the above. It is through these that we shall be able to come to well settled conclusions as to the profitableness of using concentrated manures.

FACTS AND FANCIES.

HEALTHINESS OF ROOM PLANTS.—The editor of the *Horticulturist*, in an article on Room Plants, says, "It has been objected by some that it is unhealthy to keep plants in rooms; but their arguments lacks coherence and force, and we are compelled to record our experience against the position. We believe them, on the contrary, to be conducive to health, not only by their soothing and cheering influence on the mind, but as purifiers of the air, so that all may indulge their tastes without the least apprehension of injury to their health."

FATTENING SHEEP IN WINTER.—When animals are in the process of being fattened, several things should be observed beside that of giving them as much food as they will eat. There are certain conditions in which the food itself may be placed so as to make it more or less nutritious and valuable to the animal using it. In very cold weather its value would be enhanced if the drink and food were warmed, or better still, if it were cooked. If roots are fed, they are taken with less labor, and consequently, are better digested, than if the animal felt obliged to swallow them in large pieces. These things should be so arranged as to allow it to remain in a quiet condition, and so that it may stand or lie down at pleasure. All these, with regular feeding as to time and quantity, are of little less importance than the quality of the food itself. MR. SILAS BUSH, of Skaneateles, N.

Y., in speaking of fattening sheep in winter, says, "I put them in a dry, warm place, and let them have plenty of air; give them one quart of oats each, morning and evening, with hay and pure water. I fed one in this way last winter, for three months, and it was admitted by competent judges to be as fat a sheep as they ever saw. I sold it to a butcher for \$11.00." The reader will not fail to observe that the animal had a dry, warm place, and plenty of fresh air.

RENOVATING OLD WALL PAPER.—In these days of *The Great Rebellion*, when all patriotic persons feel like economizing their personal expenses in order that they may be more able to strengthen the government by sustaining the soldiers, the prudent housewife who has decided not to re-paper the sitting-room, as desirous, will find the old paper very much improved in appearance by simply rubbing it well with a flannel cloth dipped in corn meal.

AN UNFORTUNATE CULTIVATOR.—One little "garden patch" of ours, says a wag, has been very profitable, very, this season. The snails ate up the cucumbers, the chickens ate up the snails, the neighbors' cats ate up the chickens, and we are now in search of something that will eat the cats. Can any of our agricultural friends aid us?

EXTRA FEED TO COWS.—The old plan of feeding cows used to be, to see with *how little food* the animals could be carried through the winter! We have actually heard two farmers boasting of their skill in this particular; but they usually lost a creature or two each, every spring. They seemed to consider it quite fortunate if they lost *only* one or two animals. Among good farmers, the practice now is to make the cow eat as much as she will with good appetite. This we consider the most profitable mode of keeping neat stock. The rule will not apply to horses.

Some persons feed cows sparingly until within a week or two of their time of calving, and then give them more hay, and frequently add meal to it. This is a bad practice. The cow needed this generous feed in the earlier stages of parturition, which would have given both mother and calf greater growth and strength. The practice of feeding high, either just before or after the calf is dropt, is injurious—but especially afterwards, as it excites fever, the udder is more likely to be pressed with milk and swell, and the whole system is rather weakened than strengthened by the extra feeding.

For two weeks before calving the cow should be free in a roomy and dry place, with comfortable bedding,—and after calving should be fed sparingly for a day or two on sweet, nutritious food, but not in large quantity. During the same time the water given her should be slightly warm.

NEAT CATTLE HAVE NO UPPER FRONT TEETH.—The man who purchased a cow and drove her back two miles to the house of the man he bought her of, through a driving rain storm, because *she had no upper front teeth*, probably had not his own "eye teeth cut!"

GRAIN STORED ON THE LAKES.—Navigation closed, leaving about a million bushels of wheat in store in Milwaukie, and 2,480,000 bushels of wheat and corn together, at Chicago. By far the largest amount of grain ever in store on Lake Michigan at the beginning of winter.

For the New England Farmer.

RETROSPECTIVE NOTES.

CALENDAR FOR DECEMBER—CULTURE OF HEART AND MIND IN WINTER.—In the leading article of the December number of the *Farmer*, it is truly gratifying to *one* of its readers—as doubtless, also, he thinks, it must be to *many* of them—to find that the editor has given the precedence to the *fireside* over the *farm*, or, in other words, has made the suggestions which he has submitted for the consideration of his readers, relate rather to in-door employments and enjoyments—to the culture of the mind and the affections—than to out-door employments and operations, or to the care of stock, or any other department of farm-work. With pleasure and heartfelt satisfaction, we have listened to his familiar "talk" upon the sentiments which farmers should cherish in view of the fact that December is the month of *plenty*, when the store-house, the granary, the cellar and the larder are all well filled with the good things which a beneficent and care-taking Providence has caused the earth to bring forth in abundance for the sustenance and comfort both of man and beast. He who can take his fill, or satisfy the needs and cravings of his nature, out of the various and abundant supplies of a kind Providence, without gratefully recognizing the goodness of the bountiful provider of them all, is a being whom we must regard as very low in the scale of created intelligences, and whom higher beings must look down upon with pity, mingled with disapprobation. Truly, we are the children of many mercies, and well doth it become us all to partake of these mercies with a grateful and filial recognition of the Giver. Farmers, especially, should cherish such sentiments, as they receive the bountiful supplies of good things provided for the wants and comfort of the human family, at first hand, so to speak, from the ever-mindful Provider, or more directly and immediately from Him, than any other class or portion of the great human family.

Seeing that we are all so apt to forget our indebtedness and our obligations to the Giver of all the good things which we enjoy, and that we need line upon line and precept upon precept, to arouse us out of our forgetfulness and unthankfulness, no suggestions could be more appropriate for a Calendar for this month of plenty, when all our stores and granaries are full, than such as are adapted and intended to remind us of the sentiments which we should cherish as the children of so many mercies, and of the practical demonstrations which we

should make of our gratitude and sense of obligation. *Practical demonstrations*, we say, for surely we should be unworthy and self-condemned, if we did not practically demonstrate our desire to do the things that would please so good a Father—so bountiful a Benefactor.

With much satisfaction, also, we read the hints which the editor has given to his readers in relation to the opportunity which is presented to the farmer in December and the other winter months, for cultivating his mind, and storing it with useful knowledge. May his words fall here and there on good soil, and arouse an ambition to become, every year, wiser and better. By whomsoever this ambition is cherished, the golden moments, as they pass, will be improved, and the result of well-directed *study* and *striving* will be, that he shall become not only a nobler *man*, but also a better *farmer*, for neither muscle, power, nor any other power, is of so much use to one who has to manage so complicated and many-sided a business as farming, as the highest, strongest power of all—*Mind-Power*.

UNDERDRAINING, page 540.—Of late years there have been so many proofs of the value of underdraining published in this journal, as well as in other agricultural periodicals, as ought to be sufficient to stir up all cultivators of the soil—even old fogies, and those who follow established routine—to inform themselves as thoroughly as possible as to this method of improving their lands. No improvement will more certainly *pay*, when judiciously done.

A NEW CART BODY, page 548.—If there be among the subscribers to this journal, or among those who borrow it of their more intelligent neighbors, any one who is an old fogy or a blind routinist and follower of the fashions that have come down to us from our grandfathers, he will find in this article a hint which might convert him from the error of his ways, and a lesson as to the value of making use of his own faculties, which might make him more of a man, and less a blind, unthinking follower of the fashions of a past generation. There are many other things about a good many farms, as well as cart bodies, which might be improved by a little head-work.

BEAN MEAL FOR PIGS, page 554.—If the statement here made as to the superior value of beans for fattening hogs should induce any one to think, inquire, inform himself farther, and, finally, to make experiments in the feeding of beans and bean-meal to other animals as well as to pigs, he will very certainly be led to adopt the practice of feeding them far more extensively than is at present customary among farmers. If such a one should make researches among the agricultural periodicals for a few years back, he would find that some of the more enterprising of his farmer-brethren in different parts of the country have been experimenting with beans and bean-meal as food for various kinds of stock, and have found the results so beneficial as to encourage them to persevere. As one among the many testimonies which he might find of this kind, the following may be given as a specimen: R. H. Brown informs the editor of the *Genesee Farmer* that he has fed his cows early in the spring, with three pints each per day of Indian corn and white beans, ground together in equal parts, and that he never had his cows do so well

on any other food. The cows gave a large quantity of milk, and the calves were the finest he ever raised. He says he shall sell no more beans, but feed them to his cows. To this we can only add, at present, the testimony of an English farmer who keeps a hundred cows, and who says in the *Gardener's Chronicle*, that after having tried various methods and various sorts of grain, he decidedly prefers bean-meal both for quantity and quality of milk and butter. Ground with oats or corn, they have also been fed to cattle, hogs, horses and poultry. We trust more trials will be made and reported. Try, one and all. **MORE ANON.**

For the New England Farmer.

AT TWILIGHT.

BY JOHN CALVIN GITCHELL.

The woods are dark, yet the low west
The hidden sun is lighting still,
And sharp against the sky, the hill
Stands, with its jagged rocky crest.

A fat sleek throng, down the green street
The herds come, driven to the yard,
Stopping at times, to crop the sward,
O'er which they pass with noisy feet.

The herd-boy loitering along,
Tosses his cap high in the air
To let the breeze play with his hair,
Humming the while, a merry song.

The farm-house door is open wide,
And just within, the farmer stands,
With ruddy face and sun-brown hands,
While his fair wife leans by his side.

By the vined-porch the grandsire sits,
Watching the children at their plays:
And thoughts of fargone, childhood's days,
Of shade and sheen, through his mind flits.

It is a scene, where the release
From sweating toil, makes it more fair:
And all the dim surrounding air
Seems hung about with clouds of peace.

Boscawen, N. H., 1861.

RAW HIDE.

How few persons know the value of raw-hide. It seems almost strange to see them sell all of their "deacon" skins for the small sum of thirty or forty cents. Take a strip of well-tanned raw-hide an inch wide, and a horse can hardly break it by pulling back—two of them he cannot break any way. Cut into narrow strips and shave the hair off with a sharp knife, to use for bag strings; the strings will outlast two sets of bags. Farmers know how perplexing it is to lend bags and have them returned minus strings. It will outlast hoop iron (common) in any shape, and is stronger. It is good to wrap around a broken thill—better than iron. Two sets of raw-hide halters will last a man's life-time—if he don't live too long. In some places the Spaniards use raw-hide log chains to work cattle with, cut into narrow strips and twisted together hawser fashion. It can be tanned so it will be soft and pliable like harness leather.

Every man cherishes in his heart some object, some shrine at which his adoration is paid unknown to his fellow-mortals.

WHEAT VERSUS CORN BREAD.

The urgent need of money to carry us through our political troubles, makes it a duty incumbent upon every loyal citizen to add as much as possible to the exports of the country, which furnish us with specie in return. Wheat is the one great staple demanded for foreign consumption. And every additional bushel that we can spare from our granaries will serve to alleviate the financial difficulties of the country. Mr. Judd, of the *Agriculturist*, with a view to encourage the substitution, as much as possible, of corn for wheat flour, offered, last month, premiums for the best made loaves of corn bread and cake delivered at his office. Specimen loaves were received from every loyal State but two, to the number of 250, and placed on exhibition last week. Hundreds of people manifested their interest in the subject by visiting the exhibition-room, and testing the various loaves contributed. A committee, consisting of competent persons, after two days' sitting, decided upon their relative merits. Their report will soon appear in the press of the city. We are permitted to publish, at this time, the essential points which it embraces. The first prize (\$10) for the best loaf of bread, wholly made of corn meal, was awarded to Mrs. Jane O'Brien, of Carriek, Alleghany county, Pa. The following is the recipe accompanying it:

The loaf is made up of two quarts of corn meal, one pint of bread-sponge, water sufficient to wet the whole; and half a pint of flour, a table-spoonful of salt. After rising, knead it well the second time, and put into the oven, letting it remain an hour and a half.

The second prize of \$5 was awarded to Mrs. Lott Cornelius, of Sullivan county, New York. The following is the recipe for making the loaf:

Mix two quarts of new corn meal with three pints of warm water; add one teaspoonful of salt, two teaspoonfuls sugar, one large table-spoonful of hop yeast; let it stand in a warm place five hours to rise; then add three-quarters of a pint or one and a half cupfuls of wheat flour and half a pint of warm water; let it rise again an hour and a half; have a pan well greased with sweet lard, into which pour it, and let it rise a few minutes; then bake it in a moderately hot oven one hour and twenty minutes. It is much better hot.

Mrs. R. Franklin, of Annapolis, Md., received the third premium of \$2, for a loaf made in the following manner:

Mix two quarts of white corn meal, one table-spoonful of lard, one pint of hot water. Melt the lard in the water; stir it well, in order that it may get thoroughly heated. Add half a pint of cold water. When the mixture is cool enough, add two eggs well beaten, and two table-spoonfuls of home-made yeast. If for breakfast, make over night. Bake an hour in a moderate oven.

The first prize (\$4) for the best loaf of cake of any kind, in which corn meal is one of the principal ingredients, was awarded to Mrs. W. H. Jenkins, of Williamsburgh, L. I. The following is the recipe for making it:

Combine three tea-cupfuls of corn meal, one tea-cupful of wheat flour, two table-spoonfuls of brown sugar, two table-spoonfuls of cream of tartar, one table-spoonful of salt. Mix well together while dry, adding one teaspoonful of saleratus or

soda dissolved in warm water. Work the whole to a thin batter, and bake in a quick oven three-quarters of an hour.

The second prize for the best corn cake was awarded to Mrs. H. A. Judd, of Oneida county, New York. We are unable to give the method of making it, as some of the visitors not only devoured the loaf, but stole the recipe.

EXTRACTS AND REPLIES.

SPRING-SOWN GRASS SEED—SOILING COWS—BARN STOCK.

1. Will herdsgrass or clover bear hay enough to be profitable, if sowed early in the spring, or had I better sow oats and seed together in the old way? taking after crops in consideration, which will be most profitable?

2. Can I soil two cows with profit where fair pasturing can be procured at six dollars per head, Taking increase of manure by the soiling process into consideration? What will cure barn itch on cattle?

SUBSCRIBER.

North Dunbarton, N. H., 1861.

REMARKS.—If herdsgrass and clover seed are sown about the first of April on ground in good condition, and the summer should prove a moist one, a ton of hay per acre is sometimes obtained. Perhaps the better way would be to sow oats or barley with the grass seed, and cut them for fodder. This course would not materially exhaust the soil, and the oats might in some measure protect the young grass, and give it an opportunity to escape drought, if it should ensue. The oats, when well made, will be nearly as valuable as the same weight of herdsgrass hay.

We should question whether soiling on a small scale, would be profitable, where tolerably good pasture could be had at six dollars per head,—but there are so many things to be taken into consideration, that we can scarcely offer on opinion of any value.

To cure the "barn itch," some persons use unguentum with success; others give the animal as much salt and soot as it will eat, and afterwards doses of sulphur.

USE OF RAW HIDE.

In a late number of the *Farmer* you recommend the use of raw hide. If you will tell us how to cure hide, you will confer a favor on

Enfield, Ct., Dec. 27, 1861. SUBSCRIBER.

REMARKS.—We gave the article as we found it, supposing that many farmers might find it convenient to use the raw hide profitably in some cases on the farm. Two or three inquiries have been made to the same point as the above. In the article we copied no intimation was given us as to how the skins were managed. Skins may be tanned by spreading powdered alum, or soft soap, on the flesh side, and rolling them together to remain eight or ten days, if the weather is cool.

They must then be drawn over the edge of a board—a board fence for instance—by two men, and rubbed and worked upon until they are pliable. But the raw hide, if we understand the matter, is never very soft. It may, perhaps, be made pliable by the process we have described.

CULTURE OF HOPS.

Will you, or some of your subscribers, tell me what you think of hop raising, whether it will probably be good business for a few years, and what kind of soil is best adapted to their growth? How far apart should they be set, and how many poles to the hill? I have started a yard the past season, but am not quite satisfied as to the best method of cultivation. If you, or some of your subscribers, can give me any light on the matter, you will confer a favor, and at some future day I will give you the result of my first experience in the business.

SAMUEL STANFORD.

Irasburg, Vt., Dec., 1861.

REMARKS.—There is no good reason for doubting that you may make a fair profit in the skillful cultivation of hops, provided they are properly prepared, put up, and offered in the markets at the right time.

The plants are usually placed on hills at the distance of five or six feet, and two or three poles are commonly placed on a hill. The first year poles six or eight feet long will answer, but twelve feet poles, or even longer, will be needed afterwards. The soil should be as dry as for Indian corn, should be deep and rich, and can hardly be stirred too much during the growing season.

The State of New York is the great hop garden of the Union—that State having produced in 1859, *nine million six hundred and fifty-four pounds!* The same year the English crop was cut off, which caused a brisk demand for American hops, and 49,000 bales were shipped from the port of New York alone. We export only when the English crop is cut off, which, together with the bad condition in which many of the American hops are put up, our cultivators not taking sufficient pains in that important particular, cause great fluctuations in prices.

TO STOP VOMITING IN CATTLE.

Boil tansy and mint together; give one quart of this to the beast. If it does not stop in an hour, give the same quantity again, and repeat it till the vomiting ceases. I had a case of this kind which was cured by giving two quarts of this liquid.

Danby, Dec. 26, 1861. LYMAN R. FISK.

BUNCH ON A COLT'S JAW.

I have a three years' old colt that has got a bunch on his under jaw, about as big as a hen's egg. It grows tight to the bone, like a wen that comes on cattle. Can you, or any of your subscribers, tell me of any remedy for it?

Richmond, Dec. 21, 1861. A SUBSCRIBER.

ESSEX TRANSACTIONS FOR 1861.

This finely printed book of 200 pages has just come to my hand. It contains the usual documents, together with about 50 pages of essays, by writers of taste and experience. Among the names appended to the Reports are many of the best experienced cultivators of the county. Notwithstanding the Society has ever been liberal in dispensing premiums, often paying out *one thousand dollars* a year, it has been so managed as to secure as a permanent fund on interest, all the money it has received from the State, during its forty years existence, which, together with the experimental farm, donated by the late Dr. Treadwell, of Salem, makes its present available means not less than \$16,000. If there be any other agricultural Society in the State that has been more discreetly managed, I should like to be advised of it. It has pursued the even tenor of its way, directing "its eyelids right on, and its eyes right forward," avoiding all gambling movements and fancy improvements. So may it ever be.

December, 1861.

WARTS ON COLTS.

Can you, or any of your correspondents, inform me of a remedy for warts upon colts? I have a yearling colt, whose nostrils and under lips are fast getting covered with large, seedy warts. I have applied lamp oil, but without effect.

Wayland, Jan. 2, 1862.

SUBSCRIBER.

REMARKS.—Mr. A. Briggs, of Deerfield, Mass., says that potash dissolved to a paste, laid upon the wart for half an hour, and then taken off and the part washed in vinegar, will cure a wart on man or beast.

WILL DOVES PULL UP CORN?

I have kept doves for the last fifteen years, and have never had any corn pulled up by them, although my neighbors say they pull up theirs, and damage their grain crops considerably. If this is so, I must kill them, though I have thought they do as much good as hurt.

H. T. GATES.

New Worcester, Jan., 1862.

REMARKS.—Doves are very destructive to the young peas, but we have never known them to pull up corn.

FRESH MAPLE MOLASSES.—A correspondent of *Field Notes* gives the following. Maple molasses well made and put up in cans right from the kettle, and hermetically sealed, as you would can and seal fruits, will keep as fresh as when first boiled from the sap, and this is decidedly the best plan for keeping, as when made in cakes, if exposed to the air, it will lose somewhat of the peculiarly delightful flavor for which it is so prized, and is often injured by insects. All this is obviated by canning while hot. To many families who do not make on a large scale, this need be but little expense, as the cans that have been emptied through the winter can be used until autumn fruits demand them again. Put up your best in this way. Where large quantities are made for market, the buyers must select and can for themselves.

For the New England Farmer.

THE ARMY WORM.

I discovered the army worm in the town of Wayland, Mass., October 12, 1861, on a small place owned and occupied by Hon. Edward Mellen. I was somewhat astonished to find them in such numbers at that late season, so watched their motions closely.

Upon making inquiry in the vicinity, I found but few persons who had noticed them, and they were not aware that the "army worm" was in their neighborhood. I had seen a kind of greenish-grey worm, striped with black, and it had eaten considerably the last of the season, but there were so many new things, I did not notice it particularly. I searched the adjoining fields, but could find no specimens except in Judge Mellen's case; then the question arose, how came so many on this particular piece of ground, and not one in the adjoining fields? I can answer this question in a satisfactory manner, to myself, at least.

The piece of land in question contained two acres, and was bounded on the north-east and south by rising land covered with fruit and forest trees, and on the west by a small pond of water, and a large tract of meadow. A half-acre of this land was "made land," flat, and composed of sand and muck, making a soil three feet deep, and but a little above the level of the pond. Part of this flat was cultivated, or had potatoes planted on it, but for want of care, witch grass was the cultivated crop, and the army worm was trying to set man an example by destroying it. The remainder was mowing, and the thick aftermath offered the worms food by day, and a warm covering by night, until they were compelled to seek their winter quarters. A person who has never studied entomology, will hardly believe insects capable of reasoning, as I shall endeavor to show these worms were.

I found them gathered around near the pond, in great numbers—but the weather held mild for several days, and they scattered in search of food—October 20th, I found some in a field fifty rods from the pond, or their camp ground. I discovered them feeding on the second crop of oats about 11½ A. M., and at 1½ P. M., they were all headed homeward; there were a few days colder weather, and they stopped in camp; but when there came a warm day, they sallied forth in companies in the warmest part of the day, and back to their camp ground before night. After the potatoes were dug, they crossed the dug over ground, and camped nearer the pond on grass ground, passing and re-passing in regular order, several companies abreast, and several deep. I examined them with a lantern, and found them lying in the same order, with a space about their length—1¼ inches—between the companies.

November 11th, I was setting Antwerp raspberries about 20 rods from the camp ground; at 11½ A. M., I left 10 stools with 40 stalks to a stool that I had not headed in; there was about one foot of top covered with green leaves, and when I returned at 12½ P. M., the leaves were gone, and the stalks were covered with army worms. On my appearance, they all dropped off from the stalks and started for home, all in the same direction and order, some forward and others backward, turning on the road. I had some wood

ashes handy, and scattered some in front of the worms, and wet them with my sprinkler; these they marched over, so I scattered more and left them dry; those puzzled the worms, and they "left-faced" and started around. I let a few pass, and headed off the remainder with ashes, scattering them entirely around the regiment. When the forward company came to the ashes the second time, they delegated a reconnoitering party that went the rounds and fell into place, where they remained and froze to death that night. I tried to bring them to life, but could not. The ones I let pass, steered directly for the camp. The weather was winterish from that time, and they all disappeared. I searched for them several days, and finally found them packed away around the edge of the pond; they laid from eight to fourteen inches deep, and from the water back six feet. There was about four rods in length occupied by them, and they were about the same distance from the water.

Some began to wind up after three weeks, and others I think will remain dormant, as they are not fully grown, and didn't seem inclined to change their coats for fashion's sake. In the Agricultural Report of Ohio for 1860, second series, p. 350, is an able article by J. Kirkpatrick, who thinks the natural habitat of the worm is the wild swamp grasses; and I have no doubt, from what I have observed, that they always go to some such place as the ones above spoken of, to winter, and that ashes scattered around them in quantities, will keep them in check, and dry ashes will kill them, if properly applied. Dry slaked lime is as good as ashes.

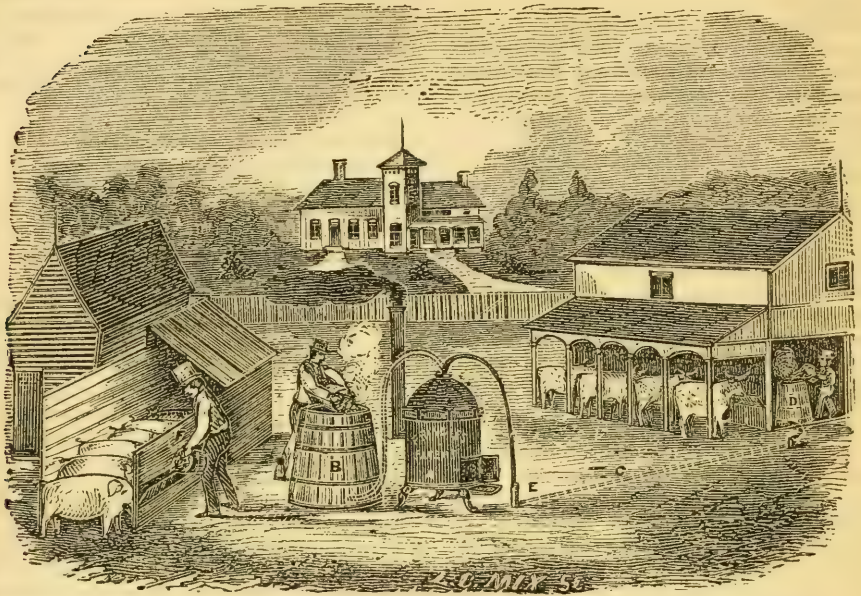
D. J. KINNEY.

Wayland, Jan. 1, 1862.

AUTUMN OR WINTER MANURING THE BEST.—Nearly all the benefits of autumn manuring may be secured, where cattle and other animals are kept in stables or warm basements, by drawing out the manure during the comparatively leisure time of winter, and spreading it at once on the land. The winter rains, whenever they occur, and all the spring rains, will give it a thorough washing, and carry the liquid into the soil; but such places must be selected for this purpose as will not favor the accumulation of water into brooks or streams, and thus carry off the manure altogether. Grass lands are much the best for this treatment, by tending to retain the manure. Nothing is better for gardens that are to be enriched for spring crops, than autumn or winter application of manure; and newly planted trees, dwarf pears, strawberry beds, &c., receive a great deal of protection against cold by such coatings, which are to be turned in, in spring.

—*Country Gentleman.*

OUR NEW OFFICE.—Our friends will please notice that we have removed the office of the *Farmer* to No. 100 Washington Street, up stairs, and directly over A. Williams & Co.'s Bookstore. The location is central, and cannot be far from most points where those who wish to call will have business to transact when they come to the city. We have a pleasant room, and shall be glad to have a few moments' chat with any of our friends who may be pleased to call.



STEAMING OR BOILING FOOD FOR STOCK.

Many experiments have been made in various parts of New England, to ascertain whether the food fed to stock could be steamed or boiled, so as to increase its value sufficiently to make the operation a profitable one. The experiments—so far as they have come to our knowledge—have been made under several disadvantages, the principal of which has been the want of a proper apparatus with which to do the work. Some have attempted it in the use of the common boiler or cauldron, others have made large troughs and turned boiling water upon the feed, and two persons, with whose experiments we are acquainted, have constructed large boxes and supplied them with steam by the use of somewhat expensive boilers. Under these circumstances, the results which have been attained do not agree, but have all tended to show that where the arrangements are judicious, a very decided advantage, or economy, may be found in cooking, or partially cooking, the food of our animals. One gentleman, who went through the winter with twelve cows and fed them on *hay tea*, has sent us the following account:

FRIEND BROWN:—In accordance with your request, I will give you a short sketch of my trial with the hay tea. I first procured a portable boiler, holding two barrels, which I placed in a shed adjoining the barn, the boiler being so situated that by means of troughs, I could pump directly into it. After filling the boiler nearly full of water, I pressed into it as much hay, unchopped, as

it would conveniently hold. Upon bringing it up to the boiling point, I let it steep a few minutes, and then dipped it out into troughs to cool. It ought to steep longer, but could not on account of the smallness of the boiler. The hay I gave to the cows to eat, the tea for drink, not giving them any other drink, but as much dry hay as they would eat. I gave the tea as warm as they would drink it, using in it what would be equal to about three quarts of coarse shorts a day, to each cow; the grain was of different kinds during the winter. As I have told you before, I kept no strict account, so that I cannot enter into particulars, and can give only the general result. According to my own observation, and that of my neighbors, the balance was decidedly in favor of my cows, both as to their condition, and the quantity of milk they gave, although they consumed a much larger amount of hay and grain. In many winters' experience of raising milk on high feed of grain, roots and hay, taking the summer and winter cows together, I found the average to be about six quarts daily to each cow, and I have found upon inquiry among my neighbors, that is as high as theirs would average. My cows, fed with the hay tea, and the same proportion of summer and winter ones, averaged about ten quarts each day, showing so decidedly in favor of the tea, as to satisfy me that *it is the way to raise milk*. I think where the farmer has a good manure cellar, (and no good farmer will be long without one,) and material to put into it, he will find this manner of feeding a great help to the compost heap.

Another gentleman, who is entirely reliable, being a man of facts and figures, states that he kept

a number of large milch cows in excellent condition through the winter, on an average of nine cents per day. He also stated that with more economical arrangements—which his experience had suggested, but which he had not put into practice—he thought he could keep them well for even less than that sum.

In looking at the great variety of agricultural implements and machinery, recently, in the rooms of Messrs. PARKER, GANNETT & OSGOOD, on Blackstone Street, our attention was attracted to a cauldron, or steamer, for cooking food for stock, and in which we became considerably interested. While looking at it, the Hon. Josiah Quincy, of Quincy, came in, who stated that he had been using one of them for several months, and had ordered a second one of larger size. He is wintering some eighty cows, and in using this boiler in direct connection with them, we thought his opinion of their value would enable us to judge pretty correctly of its merits. It is as follows:

Boston, Nov. 28, 1861.

DEAR SIR:—"Prindle's Patent Agricultural Boiler and Steamer," has been used on my farm, daily, for at least six months, and has given entire satisfaction. As a cheap generator of steam, it appears to me to merit the high eulogiums that are contained in the printed certificates appended to the advertisements.

I am very truly,
JOSIAH QUINCY, JR.

Since the receipt of that letter, we have seen this steamer in operation, and it seemed to possess many points of value over any other cheap arrangement that we have seen. It had cooked a barrel of pumpkins into "squash," and was then steaming a lot of cut hay. Dr. EBEN. WIGHT, of Dedham, on whose farm we saw it in operation, states that it operates efficiently and cheaply; that it is easily managed, and requires little fuel, compared with the common stove cauldrons.

It seems to us that its merits must be full as prominent *in the house* of the farmer, as connected with the barn. Where there are cans to be washed, or milk-pans, or hot water wanted for feeding swine or slaughtering them, it must be exceedingly convenient. So in washing clothes, warming baths, or cooking vegetables in large quantities as they are obliged to in hotels. It is unlike the kettle, as it can be made to cook at *any desired point*, in any convenient wooden vessel at hand, which is steam tight, by the use of a flexible tube or pipe. It is impossible to burn the substance being cooked or heated. It dispenses with all cleaning of kettles for every separate job, unless the top is removed, and it is used as a common kettle for trying out lard, making soap, boiling clothes, or any of the usual purposes of a kettle.

We think those needing an article of this nature,

will do well to call at the warehouse we have mentioned, and look at one for themselves. As Mr. Quincy states in his note, it is called "*Prindle's Patent Agricultural Boiler and Steamer*," and consists of two or three sizes.

WEALTH OF OLD ROMANS.

According to Cicero, the debts of A. Milo amounted to above \$28,000,000, federal currency; Julius Caesar, when setting out for Spain, is reported to have said to himself, he was \$10,000,000 worse than nothing. When he first entered Rome, after crossing the Rubicon, he took from the public treasury \$5,500,000, but at the end of the civil war put over \$24,000,000 in it. He purchased the friendship of Curio with a bribe of over \$2,500,000, and of the Consul L. Paulus, with half that sum.

Cæsus was worth in real estate over \$8,000,000, and about as much in money, furniture and slaves. Seneca was worth over \$20,000,000. Lentulus, the augur, over \$16,000,000. Augustus raised by the testaments of his friends over \$161,000,000. Tiberius left at his death nearly \$100,000,000, which Caligula spent in less than one year; and Vespasian, at his succession, said that he required for the support of the State over \$1,614,000,000. Nevertheless, though greatly enriched by his conquests, imperial Rome never came into the full inheritance of the chief wealth of the East, and the larger quantity of the precious metals must have remained excluded from the calculations of ancient historians.—*Life Illustrated.*

BOTS—PREVENTION BETTER THAN CURE.—In the winter of 1850, I was passing through Vermont, and stopped for the night at an old farmer's by the name of David Ruggles. The next morning one of my horses was suffering severely from an attack of the bots. A large dose of sage tea, made very strong, and sweetened with molasses, caused them to relax their hold, and I was soon enabled to pursue my journey. Before doing so my host informed me that he kept salt and ashes constantly before his horses, and said he thought it was a sure preventive.

Thinking it worthy of trial, upon my arrival home I rigged a box in each of my stalls, and put salt and ashes in equal proportion in them. Since then I have had a great many different horses, but have not had occasion to doctor for bots. Of course, I am not *certain* that the above prevented the bots, but I have no doubts on the subject.

It is harmless and cheap, and is worthy a trial by every one that keep horses.—*Country Gentleman.*

GRAFTING THE TOMATO ON THE POTATO.—"Horticola," in the *Horticulturist*, states that he succeeded, perfectly, in grafting a scion of the tomato upon the potato vine. He cut about one-third of the potato shoot off, just above a leaf, taking care not to injure the bud at its base. The scion, being shielded from the sun, was every day sprinkled with a little water, and it took readily. In the fall the tomato was loaded with ripe and unripe fruit, and had grown to a large size.

For the New England Farmer.

MARKET REPORTS.

MR. EDITOR:—The statement is often made that a certain newspaper article, or a certain market report, is worth the whole cost of a year's subscription. This is doubtless very true. I think, myself, that some articles from the pen of the editor or associate editor of the *Farmer*, are worth the price of the paper, and yet it does not always follow, by any means, that every one can afford to pay for it. Some farmers, who are deeply in debt, feel that they can hardly afford to expend any thing that does not promise a speedy return in money value.

If there is one department of an agricultural paper of more importance, in a pecuniary point of view, to the farmer, than any other, it is *reliable market reports*. The faithful record we get from week to week through the *Farmer*, of the sales at Brighton market, have elicited the commendation of several writers, and deservedly so, for they are honest reports, (without partiality to buyer or seller,) showing every farmer, at a glance, the true market value of the different kinds of stock. In my own judgment, Brighton market is better reported in the *Farmer*, than is the New York market by Solon Robinson, Esq., in the *Tribune*, inasmuch as it seems to me more in the farmer's interest, or, perhaps, I should rather say, in every one's interest, the reporter himself having no particular interest of his own, or his own locality, to gratify.

But my object in writing was, not to commend the reports of Brighton market alone, nor the various other market valuations of farming productions so fully and impartially given in the *Farmer*, which are all, I doubt not, appreciated, but to suggest what I conceive might be an improvement in your report on hay. Since the partial failure of the potato crop, farmers in this vicinity have very generally turned their attention more to the sale of hay, and we depend on the *Farmer* just as much to give us the Boston value of that article, as we do on the Brighton report to give us the price of a yoke of fat oxen; and what I wish to suggest is, whether it would not be an improvement, instead of quoting country hay so much, and Eastern pressed so much, to specify the price of the several qualities, as you do on beef, lumber, &c., by first quality, second quality, hay for bedding, &c. I find some of our farmers are at a loss to know whether their hay goes into Boston at the price of Eastern pressed, or country hay. I suppose that country hay has reference to loose hay drawn in from the vicinity of Boston; still I conclude our first quality hay, pressed and sent in by the cars, commands about the same price. By giving the price of the different qualities in Boston, farmers will readily perceive its home value, and govern themselves accordingly.

Those whose business it is to report the state of the markets, cannot be too fully aware of their responsible position. They act in an important sense as agents for the whole community. How desirable that those agents be so reliable as to give no just cause for the remark sometimes made, that "we can tell nothing by the papers."

Farmers should not be too sensitive to their own interest, nor strive to obtain more for an article than its true market value, but they are sur-

rounded by speculators, and, as a body, go so seldom to the city, that they need all the advantage the market affords; and an agricultural paper, of all others, should be, (as I think the *Farmer* is,) in the farmer's interest. JOHN F. FRENCH.

North Hampton, N. H., Jan., 1862.

REMARKS.—We thank you for your suggestions, and your good opinion of the *Farmer*. The attention of the Reporter will be called to the matter.

For the New England Farmer.

THE SEASON AND CROPS.

FRIEND BROWN:—For a long time, as often as I have perused the pages of the *Farmer*, which I always do with pleasure and profit, I have been resolving and re-resolving that I would contribute my mite to your columns.

I have now screwed my resolution up to the writing point, and dipped my quill—no, we have no quills, now-a-days, except for tooth-picks. *Query*—What becomes of all the quills? Have the geese yielded to the pressure of the times, and stopped discounting quills, as the pigs have bristles, since pegs have been substituted therefor?

But, as I was saying, I am about to "write for the papers." Now for a theme. Your multitudinous and able correspondents have *raked* the ground all over, leaving less encouragement for gleaners than was provided in Old Testament times. But agricultural, like moral precepts, will bear repeating, and if I should advance what has been said, and better said, by others, my labor may not be lost.

The season just passed has been one of uncommon productiveness in this region. Most of the staple crops gave abundant yield. Corn was never better; hay very abundant, and got in in good condition; potatoes from fair to good, and little or no rot; oats about middling; wheat was injured by the lice—not more than half the yield of the previous year.

Query—Would it not be better to sow in the fall? Why more liable to be winter-killed than rye? Or why not sow a month or six weeks later in spring, and thus come it over the varmints? In Wolfboro', N. H., I was told by a farmer, in the winter of 1857, that he sowed wheat on the 16th of June, and harvested it on the 16th of October, the same yielding twenty-eight bushels per acre. Rye has been a leading crop with the farmers in this valley. Rye bread in summer, and rye and Indian in winter, have been regarded throughout the whole valley of the Connecticut as lawful tender, from time immemorial. But wheat is now crowding it out. Our miller told me a few days since that he grinds much more wheat than rye.

In fruit we have suffered in common with all New England. I wish some of your contributors would tell us why there was such a dearth of fruit last season. Apples, pears and grapes, next to none; cherries, peaches, plums, none. Was it the cold? A large orchard in my neighborhood produced more apples last season than in any one year for five years previous. My Isabella, Concord and Hartford prolific grapes did well, while the natives, of which I have ten varieties, all failed. Most of my quinces were killed down to the

ground, while one old shrub, which had for a long time been battling between life and death, bore a dozen fine quinces. Peaches are among the things that were. We shall raise no more until our seasons change. There is reason to fear that cherries will follow in their wake. We have had none for two seasons, and most of the trees give signs of approaching dissolution.

But enough of this. We have other and more formidable foes than the weevil, the curculio, the borer, and even Jack Frost himself. The vermin which have poisoned our political atmosphere are now boring into the roots of the tree of liberty, and stripping it of its foliage. Our farms should not be neglected, and need not be; but the principal energies of the whole loyal portion of our people should be concentrated upon this vilest and most formidable enemy of the body politic.

Amherst, Jan. 7, 1862.

THE PUZZLED WREN.

I was sitting one June morning at the open window of a pleasant country-house, when I observed a busy wren flying back and forth through the thick boughs of a large English cherry tree, bringing bits of wood and grass to the little round hole which she had made in the bottom of the tree, for a place, I suppose, to hide her nest in. After a while she came lugging a burden that looked heavy enough for two wrens. She had been to the wood-pile, and picked up a stick longer than she was, and I watched her as she flew up to the hole with it, and attempted to go in just as she had done with her other sticks and bits. I laughed to see how puzzled she was when her burden butted against the sides, and pushed her back from the entrance. She tried it again and again with the same result, fluttering up to the hole, knocking the stick against the sides, and then obliged to flutter back again. It was very rude in the ungainly twig, she seemed to think, and the little lady actually looked as if she felt insulted. I almost expected to see her give it up; but no. Fastening her feet firmly on the edge of the opening, she placed the stick perpendicularly, and tugged with all her might to thrust it through, but in vain; then she turned it and tried it horizontally, but it would not go in. At last she tried it endwise, and I could not help clapping my hands as it slid to the bottom of the nest, and the little bird hopped in after it, with a kind of provoked triumph in her manner, as if she said, "What a fool! Why didn't I know that before?"

MANUAL OF AGRICULTURE.—We learn that this work is already largely called for by the towns in Massachusetts, to be placed in their schools. One town has ordered two hundred copies, another one hundred, and many others twenty-five to fifty copies each. We learn, also, that where it has been introduced, the pupils, both boys and girls, are delighted with the study. We supposed that such would be the case. Our youth will readily comprehend the importance to them of such a study—a study that is always highly pleasing, while it instructs.

WINTER CARE OF STOCK.

In a climate so variable as that of New England, where the extremes of the temperature sometimes range from forty degrees above zero to twenty degrees below, within twenty-four consecutive hours, it becomes us to provide a pretty thorough shelter for the animals who depend upon us, as well as for ourselves. Stock *may* be kept out of doors all winter, or in cold and cheerless barns, and come out in the spring looking well,—but it must always be at the considerable cost of a large additional amount of nutritive food over what would have been required, if the stock had been warmly housed.

The body of an animal may be compared to a stove,—place it in an ordinarily tight room, and half a dozen pounds of fuel will heat its sides red hot; but when set out in the open air, where cold currents are constantly sweeping from its sides the heat imparted to them by the fuel, two or three times six pounds will scarcely heat it too hot for the hand to rest upon it. The food which the animal eats imparts heat to the system something as the fuel does to the stove. We find a few words to the point in the *Tribune*. "Farmers do not pay sufficient attention to the warmth of their stock, but suffer them to roam about in the open air, exposed to the inclement weather. The amount of exercise is another most important point to attend to. The more an animal moves about, the quicker it will breathe, and the more starch, gum, sugar, fat, and other respiratory elements it must have in its food; and if an additional quantity of these substances is not given to supply the increased demand, the fat and other parts of the body will be drawn upon, and the animal will become thinner; also, as before observed, every motion of the body produces a corresponding destruction of the muscles which produce that motion. It is, therefore, quite evident that the more the animal moves about, the more of the heat-producing and flesh-forming principle it must receive in its food. Hence, we see the propriety of keeping our cattle in sheds and yards, and not suffering those (particularly which we intend to fatten) to rove about, consuming more food, and wasting away more rapidly the various tissues of the body already formed, and making it more expensive and difficult to fatten them."

We are perfectly aware of the fact, that it is altogether easier to sit and talk about what is best to be done, than it is to *do the thing itself*, or to furnish the "ways and means" of doing it. Nevertheless, we believe a tolerably warm place can be provided for stock in seven cases out of ten among the farmers, and that without the aid of a carpenter! We were strongly reminded of this the other day, while visiting a very old barn, by observing how completely the arrangement of the hay, a

few common boards, old shingles and laths, and a good degree of skill, or rather tact, which is a grade higher than skill, had shut out the storm and wind, and provided a comfortable leanto for a fine stock of cattle, horses and colts. The old barn would creak and groan before the blast, but the cattle patiently listened to its uproar while quietly chewing the "cud of contentment," and grew fat and strong upon their fodder.

But the experiences of a "plain, practical farmer," will be regarded as of more value than any theories of ours, and as we have a plenty at hand, we give some of them below, which we find in a New Hampshire paper for 1852.

"The barn, or building, rather, in which my cattle for a number of years were sheltered, (if shelter it could be called,) was in a very dilapidated condition. Expecting from year to year to be able to replace it with a new one, I delayed many little repairs which I am since convinced it would have been true economy to make several years before. I knew the animals suffered much from the cold, and to compensate for their sufferings, I fed them well; but while pursuing the system that necessity compelled me to adopt, I could not but observe, on comparing notes with my neighbors, that my cattle consumed considerably more food than theirs, while at the same time their condition was not only no better, but scarcely as good. However, I then attributed this fact to any other but the right cause. Knowing that some animals eat more than others, without improving in an equal degree, I presumed that mine were of this lean kind, and thus dismissed the subject from my mind.

Feeling somewhat stronger in pocket two years since, I built a new barn. The shelter it afforded my cattle was, as you may suppose, better than the old one. The feed given my cattle during the first winter was the same in quality and quantity as that of the previous winter; but I was surprised to find in the spring there was a decided improvement in their condition over that of the preceding spring. Last winter I found that I could keep them on at least *one-fourth less food than ever before*, and as I am satisfied that they have not changed their natures, I cannot attribute this saving of food to any other cause than to the comfortable shelter provided for them in the new barn during cold weather.

I am aware that there are scientific principles upon which this change may be accounted for, but aspiring to no prouder distinction than that of a plain, practical farmer, I leave scientific explanations to those more competent than myself, being content to record the simple fact, that *I save one-fourth of my cattle's food, by providing them with comfortable shelter during the winter season.*"

FEEDING BONE-DUST TO COWS.—Your correspondent "Country," says his cow's toes grow too long. I have had sheep's toes do the same while stabled. Some time ago a young farmer living some 20 miles from me, said that he had, at different times, in his barn, cows whose claws would grow too long, and occasionally one claw would grow around the end of the other claw, and that it

was cured by feeding *bone-dust*. He had fed as much as one tablespoonful each day to a cow in cut feed, with marked effect. He acknowledged it was full, strong feed. I generally feed one tablespoonful twice in a week to each cow, but do not know its effect. My reason for doing it is that my neighborhood has been pastured these 200 years, and little or no manure put on the ground, hence the soil is wanting in bone-making material.—*Country Gentleman*.

For the New England Farmer.

PLANTING CORN---RAISING ONIONS.

I believe that it is well for farmers to make experiments in agriculture, and after so doing publish the same in some agricultural paper, whether the results prove favorable or otherwise, so that others may know how to be governed in such matters. Agreeably to that belief, I last spring made the following experiments in raising corn and onions: After spreading about 32 loads of barn manure on grass land and turning it under, the land was then well levelled and harrowed smooth, after which it was rowed out 3½ feet apart, each way, and planted as follows:

One portion of the field was manured with night-soil compost, at the rate of one shovelful to four hills, another portion with Coe's superphosphate, at the rate of one handful to two hills, a third portion with wheat bran, at the rate of one handful to each hill. Before dropping the corn the bran was covered with soil by the foot; the three portions were treated alike till harvest time, then the three parts were harvested separately, and carefully weighed. In estimating the expense of the phosphate and the bran, I found that I had applied 18 per cent. more phosphate than of bran, by actual cost, and that the increase was but 6 per cent., by weight, above the bran, thus showing the bran gave the greatest gain for the first outlay. During all the forepart of the season, the bran portion was superior to the others, both in size and color. Thus I have experimented with bran for the two last years, with the same results.

NOW FOR THE TRIAL WITH ONIONS.

After trying for the last few years, with almost an entire failure, I had nearly concluded to give up in despair of raising this much-loved vegetable, but last spring I concluded to give them one more trial; consequently, after preparing my bed for parsnips, I sowed two rows lengthwise of my bed of six rods in length. I sow lengthwise, because I find it more expeditious working with the seed-sower, and the hand-cultivator running between the rows lessens the labor of raising garden vegetables much. After the onions were up, say about two inches, I sprinkled white pine sawdust along the rows so as to cover the ground completely over, wishing to prove whether sawdust was of any benefit. I left about four feet of one row without the dust; the consequence was, I had two good rows of onions, with the exception of the four feet undusted, which did not produce one single plant, proving satisfactorily, to my mind, the benefit of the dust.

Thus much, Mr. Editor, I have experimented, and send to you for publication, should you see fit to give it a place in your valuable paper.

Bedford, N. H., Dec., 1861.

T. G. H.

THE HOP CROP OF MASSACHUSETTS.

The following extracts from the annual report of the State Inspector of Hops, Mr. Charles Carter, will be of much interest, not only to the hop growers of this State, but throughout New England.

The total amount of hops inspected during the four months ending Jan. 1, 1862, was 117,019 lbs., classified as follows:—First sort, 104,861 lbs.; second sort, 7,253 lbs.; refuse, 5,805 lbs. The report continues:

The hops grown this year are better adapted to the English market than a rich yellow hop, for the good reason, that the best English hops grown in the county of Kent, are a pale color, and our hops will compare favorably with them. The hops grown in the State of Maine, on the Androscoggin River, will come the nearest to the English hop, for the good reason, the climate is the most congenial to the culture of hops. The growers of hops in the State of Maine, within the last seven years, have changed their course from very coarse picking to what at this time may be termed fine or good picking; not that we expect our growers to fully compete with the English, but one thing I can say, from letters seen from England, in reply to hops sent forward from hops grown in the State of Maine, that these hops would compare favorably with the English hops, and would readily command one pound more per cwt. than ordinary American hops. Under those favorable auspices, we need not despair of growing hops, especially in the State of Maine.

One year since the duty on American hops sent to London, paid to that Government, was £2 5s; before the crop of 1860 came off, the duty was reduced to £1. At the same time a further reduction was to take place on the 1st day of January, 1862, to 15s—which is the present duty on American hops. I would suggest to buyers to sell their hops the year grown in, as they depreciate one-third in price from new to old, which takes place at the end of the first year.

If the growers of hops will adopt my last suggestion, they may rest assured that the culture of hops will pay a remunerative price for the labor.

The price of hops the present season, since coming to market for inspection, has been from 15 to 16 cents per lb. I think, with an upward tendency at this time, with a small export demand in the absence of any hops of the growth of 1860, we may reasonably infer that all the hops of the growth of 1861 will be used, and out of the market before the new crop comes off. What old hops remain in our market are from two to five years old, consequently entirely neglected by brewers and consumers of hops.

THE EARTH A BURNING CAULDRON.—In one of his recent lectures at Manchester, England, on "Prophecy," Rev. Dr. Cumming said he had consulted Sir Roderick Murchison as to the truth of the statement that the interior of the earth was a burning cauldron. Sir Roderick replied that "no one but an ignoramus would dare to deny it." And when he, (Dr. Cumming,) quoted the words of Peter, in support of his statement, Sir Roder-

ick replied, that "not only was Peter scientifically correct, but that Job gave him, (Sir Roderick,) the first idea of gold mines in Australia, and that Job was the best geologist he ever knew."

For the New England Farmer.

TOO MUCH SEED.

Well tested experimental facts are worth more than old customs and habits. Yet people love their habits so well that they will disregard their senses, and plant a bushel of seed potatoes where they ought not to plant a half-bushel. I wish to tell nothing now, only what *I have done*, and seen others do. I have seeded my potatoes largely and sparingly on the same ground under the same treatment, and always found the light seeding to yield the best and most marketable potatoes. I find the most profitable way is, to plant in drills, putting one piece in a place, and about 8 or 10 inches apart, in rows about 2½ feet apart, with one to three eyes in a piece. I saw last season 60 bushels of very handsome, marketable Jackson whites and Davis seedling potatoes, raised from 5 pecks of seeds planted in the above manner, upon a little less than one-fourth of an acre of ordinary upland, manured in the hill moderately. Land adjoining it, equally as good, and manured better, but planted in the old way in hills, and seeded largely, did not yield two-thirds as much, under as good treatment.

Near this patch of potatoes was a bed of turnip-beets which chose to take their own way in coming up, and not more than one seed in ten made its appearance to the sunlight. They had plenty of room to grow, and they occupied it to advantage. The yield was enormous for the space occupied. Some of them weighed 13 pounds. Their average weight was 6 pounds, and as good and fine-grained for eating as ever grew. This appeared to be the result of having plenty of room to grow. Another man near by planted the same kind of seed, which came up plentifully, and were thinned out some, but yet stood quite thick, were well cared for during the season, but made a light yield. Every thing was equal in both cases, except the one came up sparingly and yielded largely, the other thick and produced a light yield. There are many other cases I might name. I will refer to only one more. This system of light seeding holds good with small grain in good strong soil, as far as my knowledge goes.

While travelling in New Hampshire a few weeks ago, I fell in with a farmer in Canterbury, who had come to the conclusion that he had been seeding his land too much, especially, as it was very strong. In laying down nine acres to grass in the spring, he sowed oats, at the rate of a half-bushel to the acre. The result was five hundred bushels of oats from the nine acres. Also his wheat, when sown thin, filled better, and yielded more. This all proves something. We are just in our infancy in the agricultural kingdom.

I wish farmers would give us their experience through the *N. E. Farmer* more than they do. There are a great many young farmers, and not a few old ones, that are earnest seekers after knowledge. It may be interesting occasionally to hear something about kingfishers, crows, hawks and owls; but for my part, I had much rather hear

our friend Holbrook discourse upon practical farming; most any one of his articles is worth the price of the paper for one year. Also, H. F. French, upon the subject of draining, which I consider one of the great subjects of the day, and ought to be kept before the people. I should like to hear the experience of our farmers in regard to seeding.

A. PHILBROOK.

East Saugus, Mass., Dec., 1861.

REMARKS.—Friend Philbrook will accept thanks for his excellent article, and be pleased to remember that we have as many tastes to satisfy as we have readers, and that some of the most progressive and intelligent farmers are deeply enamored with Natural History. They desire that all the animals, birds and insects common to the farm, shall receive some attention, as well as the more important practical matters of the barn and fields. We know of no more pleasing and attractive means of instructing children, and of creating in them a love of rural life and rural occupations, than the plan we have long pursued of occasionally introducing interesting notices of the animated life on the farm.

LEGISLATIVE AGRICULTURAL SOCIETY.

[REPORTED FOR THE FARMER BY D. W. LOTHROP.]

The *First Legislative Agricultural Meeting* was held at the Representatives' Hall on Monday evening. The subject for discussion was *Manures*, and the Hon. JOSIAH QUINCY, Jr., was called to preside.

In assuming the chair, Mr. Quincy said he felt honored by the committee in being thus selected, and observed that the subject for discussion was, to the farmer, one of the most important. As Demosthenes said, "Action" was the first, the second and the third rule for good oratory; so for good farming, the first, the second and the third rule was, manure, *manure*, MANURE! And the important question was, how can we best obtain it? He alluded to the varied commercial or patent manures, and to Prof. Johnson's analysis of them, showing the worthlessness of most of them, and said the question should be, not how we could *buy* manure, but how we could *make* it. He alluded to the practice and good effect of turning in green crops, particularly in Maryland; but after all, the most important fertilizer was barn-yard manure, and this, as far as possible, should be made at home. Speaking of the manure of the cow, he said the test of the value of her products, both as regards milk and manure, was the quality of food given her. You can get nothing out of her which you do not put in. An Englishman will buy a bullock, keep him a time for his manure, and then sell him for what he gave, or less. Mr. Lawes, of England, had made experiments in feeding cattle on cotton seed meal, and found that while a given

quantity of voidings from the food was worth \$27,86, the same quantity produced from carrots and turnips was worth only 86 cents! We hardly know how to produce good manure. Guano, the speaker said, was far more valuable from the fact that birds have no liquid passages; yet a cow, on certain conditions, can make good guano, or something equivalent.

On his own farm, where he commenced farming four years ago, Mr. Quincy stated that he had raised his hay crop up from 150 to 400 tons. He keeps many cows, adopts the *soiling system*, makes his own manure, and finds nothing is lost. He alluded to Dr. Dana's experiments with the urine and dung of the cow, showing that the liquid voidings were worth more than the solid. Two-thirds of muck and one-third of cow manure was very valuable as a top-dressing. Farmers should save urine. In Holland, the urine of a cow is valued at \$15 a year. The speaker said he saved it at his farm in reservoirs and carted it out on to his grass land. He alluded to Mr. Mechi, who forced his out by a steam engine, through pipes laid all over his land. But urine was best absorbed by muck and then spread on the land. Those who have no muck, can use anything that can be saturated. In keeping cows, not simply milk should be the object, but that of good quality, and rich manure. In conclusion, the speaker said the great secret of good farming was *high feeding*.

A gentleman, whose name was not given, inquired if urine should be reduced before being applied?

Mr. Quincy said no; give the muck all it will hold. He also inquired the views of farmers as to the time of applying manure, and as to top-dressing.

Mr. STEDMAN, of Chicopee, was the next speaker. He has a barn cellar, and mixes muck with his manure, which increases its value very much. He had put green muck on four acres of grass land, and in his case it produced two crops, and he thought it better than guano, as the latter was not lasting.

Mr. DAVIS, of Plymouth, had had some experience in regard to peat. Prof. Johnson spoke well of peat. But the speaker said it was objectionable in requiring great labor. Barn cellars are too much flooded, and he doubted whether they should be tight. In the bottom of old vaults the sand was perfectly pure; and why not have the bottoms of barn cellars porous, if there is no loss? Upland suffers very much in dry weather in his region, and peat was a good mulcher. He had applied 128 horse-cart loads to an old pasture, but the labor was objectionable. The soft paste at the bottom of the peat was very valuable.

Mr. QUINCY said cellars should be tight, and should receive only the urine of animals. It was

not important what time to apply manure. It does not lose by drying. The valuable parts of manure will yield only to the chemist or to plants. Make your own manure and spread it at any time.

Mr. HOWARD, of the *Boston Cultivator*, alluded to the dilution or *extension* of manure. Manure may be so concentrated as to be injurious. Hence urine should be diluted before being applied. Guano was usually reduced 50 per cent. He doubted whether Mr. Mechi's system was the best. Heavy soil needs straw and coarse manure, the liquid not being so beneficial as on lighter land. Peat, as a mulch, tends to lighten soil. Drs. Dana and Bartlett had discovered different kinds of muck, differing in value. Green muck was ruinous to rye, and the muck of mosses not valuable. Dr. Dana's theory was that muck should have alkalies.

Mr. ROBERTS, of Lakeville, inquired if it was necessary to have barn cellars perfectly dry? He thought not. By putting in muck it would absorb all ammoniacal waters.

A gentleman, whose name was not given, spoke of the distinction between peat and muck. Muck decomposes—peat does not. He takes sod and muck from the ditches of his low land and spreads it upon his upper grass land with great benefit.

Mr. QUINCY spoke of the difference between peat and muck. He had gone down twenty feet, and found cones of pine trees, probably thousands of years old. The upper part was peat, the lower muck—of which kind the Irish make cakes. Taking soil from one part of the farm and putting it on the other was an excellent practice. The great business of New England farmers should be in making manure and getting it out.

A gentleman, whose name was not given, asked about green manure. He had procured a great crop of rye from turning in clover. And by this process they get great crops of wheat in England—70 bushels to the acre being cited. He spoke highly of Mr. Mechi's watering with ammoniacal manure.

Mr. DEWITT, of Agawam, said a neighbor plowed in buckwheat to raise rye, but thought the wheat worth the most! He keeps his cows in his barn summer and winter, and this should be done where the land is good. He observed that he owned ten acres, and farmed it partly for profit and partly for the fun of it. Corn stalks were a good absorbent of urine; they keep the land open, and are good for potatoes. Muck will not pay the labor.

Mr. QUINCY alluded to sand as a bedding, or for sprinkling the stalls. Was used in England as an absorbent. Plowing in green crops was a hard thing to do, though useful, as they did not exhaust the soil till they began to form seed. He also spoke of anthracite coal ashes for potatoes, and cited an instance of where potatoes thus raised were very sound.

Mr. BAKER had no experience in sand, but had used sawdust for a bedding with good results. It pays well. He takes out muck in the winter and leaves it till the next fall, and then drops it through the floor into the cellar. He dug a cellar whose soil was very hard, yet it had become saturated with ammonia and phosphates. He applied manure in the fall. He steams his corn-stalks and feeds his cattle with them, instead of using them as bedding. Leached ashes were very valuable, and he had applied fifty bushels to the acre, at eight cents per bushel, to grass land, and cut three tons of hay to the acre. Farmers should not buy manure, but make it.

Mr. HOWES, of Marshfield, spoke of kelp, which was very abundant in his region. Why had it not been spoken of? It was valuable. Daniel Webster spread fish upon his land, but it burnt up the soil, and brought a prodigious lot of flies. For insects, such as squash bugs and the like, he had applied the putrid liquor of the fish, and found that while they disappeared from his cucumber vines, the latter grew enormously. Kelp and fish deserve more attention.

Mr. DAVIS spoke again of barn cellars. Barns should be put upon sandy land. Peat will carry off all water, and five inches of sand will clear any dirty water.

Mr. BAKER inquired how much it would purify.

Mr. DAVIS replied, any quantity. Green crops turned in are beneficial to light lands, and kelp should be composted. Fish on light soils are very hurtful, as they consume all the vegetation, but the remedy is composting. He spoke of different kinds of peat, and cited Mr. Colman, that salt peat was good for wheat.

Mr. HOOD, of Somerset, said sand was used in stables in Bristol county. He applies it to his stalls once a week. He had also used fish as a manure, and said that the flies they drew only annoyed people out of doors; they never entered the house. He keeps his cattle up, except three or four hours a day, and has faith in the good results of barn cellars.

The time for closing the meeting having passed, the chairman announced that the subject for discussion on next Monday evening would be *Agricultural Education*, and that His Excellency Gov. ANDREW was expected to preside. Adjourned.

IGNORANCE.—Never be ashamed of confessing your ignorance, for the wisest man upon earth is ignorant of many things, insomuch that what he knows is mere nothing in comparison with what he does not know. There cannot be a greater folly in the world than to suppose that we know every thing.

Happiness grows at our own fireside, and is not picked in the stranger's gardens.

PROVERBS FROM POOR RICHARD.

Take this remark from Richard—poor and lame; whate'er begins in anger, ends in shame.

An egg to-day is better than a hen to-morrow.

Law, like cobwebs, catches small flies; great ones break through before your eyes.

If pride leads the van, poverty brings up the rear.

He that would live at peace and at ease must not speak all he knows, nor judge all he sees.

He that can travel well afoot keeps a good horse.

The worst wheel of the cart makes the most noise.

He that falls in love with himself will have no rivals.

Against disease here the strongest fence is the defensive virtue, abstinence.

Tart words make no friends; a spoonful of honey will catch more flies than a gallon of vinegar.

Keep thy shop and thy shop will keep thee.

Beware of little expenses, a small leak will sink a great ship.

An ounce of wit that is bought is worth a pound that is taught.

A plowman on his legs is higher than a gentleman on his knees.

What maintains one vice will bring up two children.

When prosperity was well mounted, she let go the bridle and tumbled off the saddle.

A change of fortune hurts a wise man no more than a change of the moon.

He that has a trade has an office of profit and honor.

A false friend and a shadow attend only while the sun shines.

Plow deep while sluggards sleep, and you will have corn to sell and to keep.

If you would not be forgotten as soon as you are dead and rotten, write something worth reading.

Nothing dries sooner than a tear.

Scarlet, like silver and velvet, have put out the kitchen fire.

Never take a wife till thou hast a house to put her in.

Hunger never saw bad bread.

The poor have little—beggars, none—the rich, too much—enough, not one.

Old boys have their playthings as well as young ones. The difference is only in the price.

If a man could have his wishes, he would double his trouble.

A SINGULAR CASE.

Mr. MOODY H. ROBINSON, of Hancock, Vt., writes us that in May, 1860, he was in the town of Granville where he was invited by a Mr. Allbe to see a sick heifer, which he did, accompanied, also, by Mr. J. Hubbard. He found that the heifer could not drop her calf, although engaged in the effort to do so for a whole week. She swelled badly for a time, and then her udder and body gradually shrunk away, and she was turned off to pasture. In the spring of 1861, she was turned to pasture again and grew finely and fatted well. On the 28th of December Mr. Robinson was called

to slaughter this heifer—she having been purchased and brought to Hancock by him—and in the presence of Mr. C. C. Hubbard, L. C. Abbott, E. Hubbard, and Mr. Allbe and his son, he says he took from her *the calf heretofore spoken of*, which weighed 87 pounds! It was found grown tight to the womb. The feet and legs were rotten to the knee joint, and the hair in some places was off, but no disagreeable odor was perceptible! The weight of the heifer when dressed was 573 pounds.

He also states that he had lately butchered a hog for Mr. AUGUSTUS FASSETT, of Hancock, whose weight was 777½ pounds.

If the first of these stories is not fact, it is a very *lively* fancy. We have no reason to doubt the statement. It does not appear to us to be a *lusus nature*, but one of those wonderful *provisions of nature* to preserve life, which sometimes occur.

SUGAR.

Sugar is not only a condiment; it is an important article of diet, and aid to digestion. Though the use of sugar as an article of food seems mainly to supply the carbon used in breathing, yet it undoubtedly contributes also to the production of fat, for during the severe labor of gathering the sugar crop in the West Indies, in spite of the great exertion and fatigue, it is said that every negro on the plantation, every animal, even the very dogs, will fatten.

The conversion of starch into grape sugar, also appears to be the first step in its digestion; and it is probable that the greater difficulty with which cellulose is converted into sugar, is the cause of its indigestibility and uselessness as an article of food. Sugar also plays an important part in many processes of the animal system, and appears to be necessary to the production of bile. It has been detected by Lehman and Bernard in the blood of man, and in that of the cat, dog, and ox. Sugar is also supposed to be necessary to the process of incubation, where, by its peculiar solvent action on the lime and phosphate of lime of the shell, it is thought to assist in the formation of the bones of the chick, and though this idea has not yet been demonstrated, it appears highly probable, from the general occurrence of sugar in the egg. As an instance of the marvellous processes going forward in the human frame, I may mention that in the terrible disease called diabetes, all the amylaceous food converted into sugar, instead of being assimilated by the system, as in health, passes away, the sufferer thus deriving no benefit from the food.

Sugar lies under a ban for injuring the teeth. What shall we say of this? The negroes employed on sugar plantations, who eat, perhaps, more sugar than any other class of people, have almost proverbially, fine, white, sound teeth, which they retain in old age. But, on the other hand, in England, persons employed in the sugar refineries, who are from their occupation obliged constantly to be tasting sugar, lose their teeth from decay after a few years. A strong solution of pure sugar appears to have no action on teeth after extraction, even after many months, and even when already decayed, the action upon them is scarcely percep-

tible. But sugar, in combination with a small amount of lime, or alkali, has the property of dissolving phosphate of lime, which is contained in large quantities by the bones and teeth; a circumstance which may explain in some measure the contradictory nature of the facts. Thus the inferior varieties of sugar and treacle, which always contain lime derived from the process of manufacture, and many kinds of confectionary into which lime enters as an ingredient, would be expected to have an injurious action on the teeth, especially if there should be a break anywhere in the outer coating of enamel. On the other hand, *fresh* honey and fruits, which contain a large percentage of sugar, but in which it is not likely to occur with lime in combination, are so far above suspicion, that some fruits—as strawberries, plums, &c., which contain much sugar, have even been recommended as aids to the securing of good teeth.—*Field Notes.*

EXTRACTS AND REPLIES.

THE CULTURE OF FLAX.

1. Is there any treatise on flax culture, the study of which would enable one not acquainted with the business of flax-raising to conduct it successfully?

2. Does New England afford a market for any considerable amount of flax? If so, where might it be sold, and at what price?

3. In what condition must it be sent to market? I suppose it would need to be dressed at home; if so, what would be the cost of machinery for preparing it for the market, and what the probable cost of dressing? By dressing, I mean separating the fibre from the stalk.

4. I wish, also, to learn the cost of a machine for grinding bones into meal, and the power required to propel such machinery.

ADIN BUGBEE.

Snow's Store, Vt., Jan., 1862.

REMARKS.—1. The *Farmer's and Planter's Encyclopedia*, and the *Farmer's Guide*, each contain directions for the cultivation of flax, and so has *Stephens' Book of the Farm*. It is not at all difficult to cultivate, and any land that will produce a good crop of Indian corn will bring a good yield of flax.

2. It must be sent to market dressed, or what is called "lint," and a gentleman who has been very largely engaged in raising flax, informs us that there is a steady demand in New England for three hundred tons, annually. Where large quantities are produced in the same neighborhood, it might be dressed by a new process which accomplishes the work with great rapidity. We are not able, however, to inform our correspondent at what cost. Four hundred pounds, per acre, of the lint is considered a good yield. We have no doubt, whatever, that the culture of flax may be made quite profitable to New England farmers, as nearly all that is now used is imported, and as the oil from its seed, and the cake, after the oil is extracted, are always in quick demand.

4. We have seen bones ground in a small, iron

mill, which was propelled by steam, but did not inquire the amount of power required to carry it, —nor do we know the cost of such a mill.

RICH LAND THAT PRODUCES NO CROPS.

I have a piece of land containing about one acre, that for a great many years has been manured highly, and bore very great crops of grass, until the meadow moles began to work in it, and cut the roots of the grass off, and almost killed it out. In the spring of 1860 I plowed it up, and found the soil to be a rich black loam. I planted it with potatoes, expecting a large crop, but did not get a quarter of a crop; last spring I sowed it with wheat, but only got three bushels. Where the soil is the richest, wheat did not grow at all, neither would the weeds grow. Can you tell me what I can put on it to secure a crop?

Apple trees are now upon two sides of the piece; would young trees set out in the piece be likely to flourish? L. P. R.

Millbury, Dec. 30, 1861.

REMARKS.—It is difficult to give an opinion as to what ought to be done with such a piece of land as is described above, from a written description of it. It needs to be seen, as the surroundings of a piece of land are often as much in fault as the land itself. It seems to us, however, that if 30 bushels of oyster shell lime were added to the acre, and the land planted to corn, or laid to grass, success would follow.

THE NEW ENGLAND FARMER.

Having received this weekly publication ever since it was commenced by Fessenden, more than forty years gone by, and perused its pages every week, I think I can speak with some confidence, of the character of the paper. I look upon it as one of the most agreeable and reliable of guides in the labors of the farm. Its opinions indicate calm consideration and enlarged observation. It notices such topics as particularly concern its readers, and carefully avoids all fancy speculations and extravagant assumptions. Let any farmer take it, and carefully peruse and preserve it for occasional reference—he will find it of more value at the close of the year, than any cow in his stall. If he should not so find it, I will cheerfully pay his subscription, if he will send me his name.

Dec. 28, 1861.

J. W. PROCTOR.

WINTER IN VERMONT—CROPS—A FINE HOG.

Cold and dreary winter has again made its appearance, reminding us that the wheel of time is continually moving onward. The snow is now about half an inch in depth. During the month of November last, the thermometer averaged at 6 A. M., 24° above zero; 12, M., 36°, and at 6 P. M., 31° above. Thus the month averaged five degrees colder than the month of November, 1860. The hay crop here last summer was very good, and hay is selling from \$4 to \$6 per ton. The corn and barley crop were good, but oats and wheat are not so good as was supposed when they were harvested; however, they are full an average.

Mr. ERASTUS HOWARD, of this town, killed a

hog 18 months old, recently, which weighed, when dressed, 536 lbs. Who can beat this? Even the usually quiet mountains and valleys of Vermont are now wide awake by reason of the war, confidently believing that right will triumph over oppression.

East Hardwick, Vt., 1861.

MATCHING STEERS' HORNS.

I noticed in a late *Farmer* an article in regard to matching steers. I would like to know if you, or any of your subscribers, can inform me how to match the horns of steers, in case one horn is inclined to turn down? I have often asked the question, and some say if they turn down, by scraping them on the upper side they will turn up, and some say on the under side; so I am left entirely without the true knowledge.

Marlboro', N. H., 1862. CLARK HILL.

REMARKS.—We have no knowledge in this matter, and hope those who have will reply.

BRONZE TURKEYS.

R. Goodell, of Antrim, N. H., can obtain *full blood* bronze turkeys of the subscriber. Price \$4 per pair.

N. B. ROWE.

Laconia, N. H., Dec. 18, 1861.

HENS' NESTS.

Fowls of all kinds, when laying, like a secret place where their fellows cannot see them. They do not like to squat down in the henery, surrounded by a greedy flock, that are ready to pounce into the nest as soon as an egg is laid, and devour it. Therefore, to gratify the hen's secretiveness, and at the same time save the eggs from being devoured by one of the flocks, my practice has been, for a number of years, to make their nests in nail kegs, not those that are very small, nor the largest ones, but of those that will hold about one hundred pounds of nails. In years past, I have been accustomed to fill a keg about half full of straw for a nest; but the past winter I have sawed all the kegs in two equal parts, knocking out the heads, and then nail a piece of cloth over the large end of each half keg, for a bottom. Any kind of old, or new cloth may be tacked on with small trimming tacks. During the winter, these half kegs are nailed up against the side of the henery, about four feet from the floor. Hens that lay, will soon learn that when they get into these nests, their fellows cannot see them, as they are completely secluded in their cosy little nests; and if they themselves are disposed to eat eggs, they find that, if they attempt it while standing on the edge of the keg, they cannot reach them conveniently; and if they hop down into the nest, and attempt to pick the eggs, they will roll down against their feet, and they soon learn that they are not able to pick hard enough in such a position to break the shell. I find that a cloth bottom is superior to a wooden bottom, covered with a nest of straw. As the weather becomes warmer, so that the hens seek nests in the yard, we make nests in secluded nooks, or the kegs might be removed from the henery, and nailed against the side of the fence, and a little roof made over them.—*Anonymous.*

For the New England Farmer.

"WASTE NOT, WANT NOT."

This was a Franklin motto. Apply it to the farm, and its bank deposits. Manure heaps are the sub-treasuries of the farming interest. Waste of manure is waste of wealth. Every miner who digs for gold, must dig in the dirt. But the farmer first deposits the gold in the ground, and afterwards digs it out with increase. The gold he plants, he gathers from the sources of consumption and decay, where carelessness may leave a loss.

Wisdom is wealth; time is money; money is money; and equally so, *manure is money*, to the farmer. Where shall we dig for riches? Where shall we go and gather up wealth? "Go to the ant, thou sluggard;" go to the squirrel, thou spendthrift; go to the manure-composter, thou foolish farmer, who hast nursed poverty, by working a hungry soil, and getting nothing, because you gave nothing as a basis of production.

Gather it at the stable. Mix well the solid droppings of the cow with twice its bulk of meadow muck; money in mud. Loam will serve a good purpose, if nothing better can be had. Pine leaves are almost priceless in the compost. And be very sure, if no great loss would be allowed, to put enough dry peat, old rotten straw, or other substance suited to the purpose, to take up all the liquid that she voids. Take like care, also, of the voidings of the ox and younger cattle. The noble horse, well fed, well used, furnishes much material to mix with muck; three times the measure of his solid excrements, with dry peat, sawdust or old straw, sprinkled with old brine, plaster, refuse salt, to save the urine—money from many things made into manure.

Gather a pile from the pig-pen. Piggy does not appropriate much for muscle, from the fat of his feeding, but pours out big bottles of ammoniacal liquor to magnify the manure heap. The gift is a great one, and never to be despised by the man of a flourishing farm. Pile the pine scrapings into his pen, with old leaves, loads of loam, and let him make his mark as a manufacturer; and he will do it in defiance of war or tariffs. Piggy's first work in the world is to provide for the corn crop, and when that comes in, in lusty loads, he will consent to be put into pork, for the benefit of princes, or paupers.

Gather gold from the hen-house. Pile the peat under the hen-roost; scatter ashes lightly over, or old lime, and saturate it with slops from the chamber, and repeat the same often, layer upon layer, mixing it all well, before each fresh addition of muck or peat. It will be cheaper than poudrette from Lodi, and as rich as a California quartz gold mine.

Gather gold from the sink drain. The suds and grease that go away there, contain gold; gather it up for the garden grounds; mix it with muck, or carry it to the currant bushes, or almost anywhere to feed the growing crops, and gold will grow out of it.

Save the suds from the wash-room. There are wonders of wealth in such mineral waters. They are good for sickly cabbages, melons, pears, squashes or tomatoes. They make all growing things to glisten in the glory of their growth.

Save the slops from chambers. Waste is as wicked there as anywhere. Man need not pride

himself above producing his portion of the food of plants; he was made of earthy matter, air and water, and wastes these daily from himself, in substance for the food of vegetation. "Waste not, want not."

Gather from the privy. There is no use, boys, in snuffing. This turning up the nose is of no more value in a young man, than it is in a blooming miss. Pride is peevish, and always out of place among the working world's nobility. Pile in the muck, or loam, with a mixture of plaster, much old rotten chip dirt, and drive away unpleasant odors by putting on new layers often; and carry away a great pile to the corn-field. You may bring it back in gold.

Gather all the ashes. They will answer for their application almost anywhere, in "words fitly spoken—like apples of gold, in pictures of silver."

"Waste not, want not." Gather manure from the mill, scrape up around the shop, take care of cotton waste, waste not old woollens, tax the tanner for his refuse truck, make the merchant a fair offer for old brines, call upon the collier for his charcoal dust, and tax all trades that the farmer feeds; buy when and what you cannot save, if it will bring back the gold; but, man of the muck heap, remember, "waste not, want not."

Lee, N. H.

COMINGS.

For the New England Farmer.

REMOVING LEAVES FROM THE FOREST.

MR. EDITOR:—Some writers recommend to remove the leaves from the forest, for the purpose of bedding animals, mulching trees, protecting garden plants, &c.

Undoubtedly they are profitable for all these purposes, but the question naturally arises, "What effect would be produced upon the soil of the forest should the process of removing the leaves be carried to any considerable extent? Would it not be impoverished, and the trees retarded in their growth, just in proportion to the amount of leaves removed?"

I have upon my farm a slight swell of land, extending nearly from north to south, upon which grew quite a grove of oaks and walnuts; but after they had attained about one-half their natural size they remained stationary, as it were, for some years, or at least made no perceptible growth; and why? It seems to me it was simply for the want of food; the leaves in the autumn being blown by the western winds into the valley upon the eastern side of the hill, instead of remaining where they fell, to protect and enrich the roots of the trees which produced them.

In conversation with an intelligent farmer of Lunenburg, he said he had observed the same result respecting the trees upon several of the hills of that somewhat hilly town.

It may be very well to secure and save the leaves from shade trees by the roadside, especially in places exposed to the wind, but to deprive the forest of the very food which nature designed for it, for the purpose of feeding other portions of the farm, it seems to me, so far as profit is concerned, is very much like taking money from one pocket and putting it into another.

Leominster, Jan., 1862.

A. C. W.

For the New England Farmer.

HOW TO SELL FRESH PORK.

Whether to barrel, or dispose of in carcass, is often a perplexing question to those farmers who are fortunate enough to raise pork to sell. And here, like too many other problems in farming, we are generally guilty of jumping at a conclusion, without any positive knowledge, and using the Yankee prerogative of *guessing* which is the better way.

In arriving at a conclusion, reference must be had to price, markets, location, &c.,—although the price of pork in the carcass, usually, for the time being, corresponds very nearly to barrel pork.

In order to aid somewhat in throwing light upon this matter, the writer instituted some carefully made experiments the present season, as to the per centage of side pork, hams, lard, head, &c., in the carcass to which, (such as they be,) the readers of the *Farmer* are welcome, and which may aid some in determining the question referred to at the commencement.

FIRST EXPERIMENT—Weight of hog, dressed, 296 pounds.

Weight of side part was.....	166 lbs.
" " hams.....	55 "
" " lard.....	28 "
" " head.....	14 "
" " bony pieces, feet, shoulders.....	33 "

296 lbs.

SECOND EXPERIMENT—Weight of hog, 238 pounds.

Weight of side pork.....	126 lbs.
" " hams.....	49 "
" " lard.....	20 "
" " bony pieces, shoulders, head, &c.....	43 "

238 lbs.

THIRD EXPERIMENT—Weight of carcass, 258 pounds.

Weight of side pork.....	135 lbs.
" " hams.....	55 "
" " lard.....	22 "
" " head, shoulders, bony pieces, &c.....	46 "

258 lbs.

It will be seen from the above that, in each of the three trials, the amount of side pork was about 55 per cent., of hams 20 per cent., of lard from 8 to 10 per cent., and showing an aggregate of 82 to 85 per cent. of sides, hams and lard, (all about of equal value,) in each animal. The hogs were, a part of them, pure Berkshires, and a part were a cross of Berkshires and Suffolks; number 2 being one of the Suffolks cross. I might also state that the hams were cut as large as practicable, consequently diminishing correspondingly the amount of sides—and the shoulders taken out as small as possible, being governed by the market in so doing. I should judge that in the ordinary way of cutting, 5 per cent. might safely be added to the side, and the same abstracted from the hams. But this is of slight consequence, as the price is usually very nearly equal.

Let us look again at this, and see how it figures. I could have sold my pork for 6 cents, (I barrelled it.)

Take No. 3, weight 258 lbs. at 6 cents.....	\$15.48
Gave 190 lbs. sides and hams, worth say 8 cents..	\$15.20
Lard, 22 lbs., at 8 cents.....	1.76
Heads, &c., 46 lbs., at 3 cents.....	1.38
	\$18.34
Less 1 barrel, and 1 bushel salt.....	1.50
	\$16.84

So that, even at this calculation, I should save something over a dollar by packing. But if I could sell my pork without the cask, and weight it

from the barrels, I should save the price of the barrels, and possibly gain something in the weight of the pork. And again, the price of the sides and hams are, it will be seen, put low in proportion to the price in the carcass.

Thus from these figures each may be assisted somewhat in coming to a conclusion as to which will be the most profitable course for him to pursue; depending wholly, of course, upon location, markets, and the like, the object being merely to ascertain with positiveness the proportionate amount of each kind of meat in the carcass.

WM. J. PETTEE.

Salisbury, Conn., Jan. 8, 1862.

PATENT OFFICE REPORTS FOR 1860.

Through the polite attention of the Hon. CHARLES SUMNER, we have received the *Patent Office Reports* for the year 1860,—comprised in three quite well printed volumes, two of which are devoted to *Mechanics*, and the third to *Agricultural* subjects. The second volume is entirely made up of illustrations of the articles patented, and contains *four thousand three hundred and sixty-two* engravings, each in a very fine style of the art. About *nine hundred* of these illustrations *relate directly to agriculture*, the most numerous of which are *harvesters, harrows, corn-planters, plows and cultivators*,—there being no less than ninety-seven of the latter.

The third volume is entirely agricultural, and its pages embrace many important subjects. The preliminary remarks give a brief review of the provisions made by several countries of Europe for the promotion of agriculture, from which it appears that a most lively interest is taken by the leading governments there, and that the art is greatly facilitated by the various aids thus afforded it.

In the course of these remarks it is stated that thirty-two thousand healthy *Tea Plants* have been disseminated among gentlemen who had expressed a desire to experiment with them, and that eight thousand more will be distributed this winter. Most of these plants were sent to persons south of Virginia and Kentucky. The Superintendent adds—"It is confidently hoped that by substituting machinery and steam power for the tedious and laborious Chinese mode of preparation exclusively by hand, *tea* may be extensively manufactured here, and even become an article of export."

In speaking of our animals, the Superintendent quotes a portion of a communication from Col. Daniel Ruggles, U. S. A., in reply to a resolution of inquiry respecting the buffalo, submitted to Congress, as follows:

"Perhaps no animal with which we are acquainted possesses such remarkable properties or qualities. His migratory habits and fitness for great extremes of heat and cold are the results of 'natural selection and the struggle for existence'

for untold centuries, by which he has arrived at a vigor of constitution, fleetness and muscular strength, rarely, if at all, met with in the ox tribe. These are qualities of great value, which cannot be disregarded, and particularly when we consider the direct and indirect advantages that judicious crossings of domestic animals have bestowed upon civilization to an extent not to be calculated.

"A full grown, male buffalo will weigh from 1200 to 2000 pounds, and even more. In winter, his whole body is covered with long, shaggy hair, mixed with much wool: on the forehead this hair is a foot long. The Indians work the wool into cloth, gloves, stockings, &c., which are very strong, and look as well as those made from the best sheep's wool. The fleece of a single animal has been found, according to Pennant, to weigh as much as eight pounds."

The first paper is upon the operations at the *Government Experimental Garden*,—then follow papers upon *Fertilizers*, *Notes on the Recent Progress of Agricultural Science*, on *Observations of English Husbandry*, by Judge French, on *Irrigation*, on *Grasses for the South*, on *Cattle Disease*, or *Pleuro-Pneumonia*, *Bee Culture*, the *Culture of Fish*, on *Insects Injurious to Vegetation*, *Wine-Making*, *Grape Culture*, in the open air and in *Graperies*, on the *Forests and Trees of North America*, a very interesting paper on *Culture and Manufacture of Tea*, one on *Notices of Chinese Agriculture and its Principal Products*, and a List of the *Agricultural Inventions or Discoveries* for the year 1860.

These articles are ably written, and perhaps occupy the space as well as anything that could have been selected. The mechanical appearance of the volume is superior to that of its predecessors, with the exception that the type used is too small. Better give us a less quantity on the good old "small pica," or at least, "long primer" type, than crowd in more matter on a smaller type.

SCREWING ON NUTS.—We have sometimes known nuts on threshing machines, circular saws, &c., to be found so tight that no wrench would remove them. This was because they had been held in the hand till they became warm, and being then applied to very cold screws in winter, they contracted by cooling after on, and thus held the screw with an immovable grasp. Always avoid putting a warm nut on a cold screw; and to remove it, apply a large heated iron in contact with the nut, so as to heat and expand it, and it will loosen at once—or a cloth wet with boiling water will accomplish the same purpose.—*Country Gentleman*.

TO STOP BLEEDING.—A correspondent of the *American Agriculturist* writes that bleeding from a wound on man or beast may be stopped by a mixture of wheat flour and common salt in two parts bound on with a cloth. If the bleeding be profuse, use a large quantity, say from one to three pints. It may be left on for hours, or even days, if necessary.

For the New England Farmer.

METHODS OF ENRICHING LANDS.

I noticed an article in one of your late papers on the *best method of enriching land*, recommending plowing in green crops as perhaps the best. There are two methods the farmer may practice to enrich the soil. One is, to plow in green crops, as recommended in the *Farmer*, the other is to raise hogs, and I am rather in favor of the latter. With good management in raising swine, you can generally get their cost, and something more, but not always; some years there will be a loss. Notwithstanding this, the farmer should pursue a steady course, year after year.

I have, in my day, had considerable experience in raising hogs, and my practice was to select the best breeds, raise my own pigs, feed well, and give them a dry, clean bed. Cooking their food is a good practice. Some forty years since I read in an agricultural work a description of the method practiced among the best farmers in Pennsylvania, of having two vats for fermenting the meal—one to use after it had fully fermented, the other while it is fermenting. I have tried it but partially; I supposed the hogs would not relish it as well, but found they seemed to like it the better. This fermentation should be conducted on the same plan as distillers adopt, carrying it to the same point. I am inclined to think this is the cheapest method of cooking their food.

Those who make cider may use sweet pomace to advantage—the pomace is made worth more than before after the cider is pressed out, by boiling it and mixing meal with it. I mean for shoats that are from four to six months old.

One word or two on plowing in green crops. Any green substance is worth double put in the ground green than it is after drying. For this reason, I cover up all weeds when I hoe in the garden, or in the corn or potato field; I always cover all my potato vines as I dig them, it is considerably less work than to collect them and put them in the hog's pen, as many farmers do.

If you get a large crop of weeds in your garden about the middle of August, commence on one side, make a hole four or five inches deep, pull in the weeds and cover them two or three inches deep, and you almost destroy your crop of weeds; the seed will all sprout but none will ripen, and you will find your garden enriched by your great crop of weeds. But if you suffer them to ripen, your land is greatly impoverished.

By raising hogs and attending to them, giving loam, horse dung, weeds, and any and all substances that can be made into manure, you can go on increasing the value of land, I think, cheaper than in any other way.

DANIEL LELAND.

East Holliston, Jan. 1, 1862.

COMPOSITION TO STOP LEAKAGE.—A correspondent of the *Lynn News* gives a recipe for a cheap composition with which leaks in roofs may be effectually stopped. Having a leaky "L," he says:

"I made a composition of four pounds of resin, one pint of linseed oil, and one ounce red lead, and applied it hot with a brush to the part where the "L" was joined to the main house. It has never

leaked since. I then recommended the composition to my neighbor, who had a dormer window which leaked badly. He applied it, and the leak was stopped. I made my water-cask tight by this composition, and have recommended it for chimneys, windows, etc., and it has always proved a cure for a leak."

For the New England Farmer.

PLEURO-PNEUMONIA.

GENTLEMEN:—As an article is being published by the press, under the above caption, it seems proper that the facts in the case should be stated.

Mr. C. C. Barnes, of Squantum, a farmer, called Jan. 7th, at the office of Ex-Gov. Brown, stated that he had a disease among his cattle, and requested him to visit his farm, accompanied by some one qualified to judge of the nature of the disease. Accordingly, he called upon Mr. Secretary Flint, inviting him to go with him, but he being unable to go, immediately addressed me a note, requesting me to "give it a full examination." The next day, Gov. Brown and myself visited the farm of Mr. Barnes, from whom we received the following statements:

One of his cows was taken sick the last week in April, and died in May, between the 12th and 16th; upon opening the thorax considerable fluid was present, and the lungs diseased. Another, taken sick the latter part of November, died the first week in December. On the same day that the last one died, a butcher came for a fat cow; while there he witnessed the diseased lungs of the one that died, and afterwards stated to Mr. Barnes that the fat cow's lungs were as bad as the lungs he saw Mr. B. take out of the one that died. The above is nearly the language used by Mr. Barnes.

I then examined four of the herd, consisting of nine head; one of which had been sick six weeks since, and partially recovered, though she coughs much; a portion of one lung is solidified. Another had acute disease in an aggravated form, the left lung entirely useless, and the right also diseased; in breathing, every expiration was accompanied by a grunt, or moan. Another, with acute disease, coughs much, has quickened respiration, with loss of appetite. The remaining one I did not like to give an opinion of, as she was far advanced in gestation.

As Mr. Barnes was satisfied that the second one mentioned above could not recover, he desired to have the lungs examined. Accordingly she was killed. On opening the thorax, from six to eight quarts of serum was present, and the left lung had adhered to the costal pleura and the pericardium by the intervention of exuded lymph. In cutting into the lung, nearly the whole of it was solid, presenting the peculiar appearance always found at that stage of exudative pleuro-pneumonia. The

anterior portion of the right lung was also diseased, and of the same character.

As Dr. Ellis had expressed a desire to see the lungs of an animal in the acute stage, I brought them to Boston and delivered them to him; others, doubtless, had an opportunity to see them.

E. F. THAYER,

Veterinary Surgeon, No. 15, United States Hotel.

Boston, Jan. 14, 1862.

IRELAND AS SHE IS.

Ireland is not learned in a day. The Englishman who fancies that he has grasped the social characteristics and political necessities of the country when he has made himself master of "Harry Lorrequer," "Castle Rack-rent," and "O'Keefe's Farces," and digested the matter of fifty "Lenten Pastorals" and "Tenant-right Resolutions," will be surprised at the magnitude and the solidity of the interests, and at the gravity and subtlety of the character, which on a closer contemplation comes forth, like the great headlands of our seacoast, into stern and massive relief. He finds that the caricatures of a dead and buried generation are not portraits of existing men and manners, and that the clamors of the country are not its wants. He fails to discover anywhere the tipsy and insolent gentry horsewhipping a rack-rented tenantry, and pistoling one another at eight paces from muzzle to muzzle—who figured in his dream of Ireland.

He sees little or nothing of the "squalid apothecary," the blundering, the drunkenness, the fatuous good-nature, and indiscriminate battery and assault, without pretext or purpose, which are described as the amiable peculiarities of a peasantry who will barter their last articles of clothing for a bottle of whiskey to treat you with, and then, with a good-humored "hurroo," break your head without rhyme or reason, and finally give you their heart's dearest affections in exchange for a good joke or an indifferent pennyworth of tobacco. The whole of this monstrous mirage vanishes the moment he sets his foot upon the soil of Ireland. He beholds, instead, a gentry as intelligent, hard-working, enterprising, thrifty, and, in the highest sense respectable, as any in the empire; and a peasantry as industrious and temperate, receiving a fair day's wages for a fair day's work.

He will see a tenantry possessed of improving farms, at reasonable rents, and of sufficient dimensions; and, above all, a vast and energetic Protestant population, self-reliant and prosperous, and altogether unlike his ideal of an Orange community. He will find his notions of the relations of parties, the social facts of the country, and the wants and abuses of its domestic system, extensively modified, and still more extensively demolished. And if he possess (a faculty more uncommon than is supposed) the power of simple perception and energy to think and conclude for himself, he will discard nearly all he has previously conceived, and commence, *ab initio*, the study of the grave and complicated question. — *Dublin University Magazine*.

The road ambition travels is too narrow for friendship, too crooked for love, too rugged for honesty, and too dark for science.

HIGHWAY ROBBERY.

This is a crime often perpetrated in New England by men of respectability and wealth. The plan of operation is somewhat as follows: A man owning land bordering upon the highway, desires to re-set his fence, or re-lay his wall. Immediately he begins to mark out the bounds and limits of the proposed change. Eight men out of every ten, instead of building the new fence where the old one stands, encroach upon the road from six inches to two feet. Such encroachments we have witnessed scores of times. The usual excuse for thus robbing the highway, is the laudable desire to have "the line straight." The eye for the beautiful must be gratified, *probably*. But if in "making the line straight," the location of the fence or wall must be changed, why does it always happen that the change is never made at the expense of private property? Why do men never straighten bounds by cutting off narrow strips of land from their own possessions? Why must the highway be *robbed* to gratify a private whim?

The fact in the case is just here. Owners of land are as avaricious as owners of merchandise; and they adopt this mean way of getting a foot or two of soil without paying for it. The plain terms for such deeds are meanness and robbery. We never see a fence crowded into the road in this way, without saying, a mean man has done it.

Then again it often happens that the rights and convenience of the travelling public are infringed and imposed upon by these highway robberies. The width of the road is seriously diminished, illegally, and by men who would be greatly incensed, should they be openly accused of dishonesty. We call to mind a bit of road, perhaps two furlongs in extent, where the land on both sides is owned by one man. Within twenty-five years, the fences on either side have shown a gradually increasing attraction for one another, and if they approximate during the next quarter of a century as rapidly as they have approximated during the last, they will at the end of that period be united. The road will be swallowed up by the greedy meanness of the owner in question.

Then, too, we have often noticed that roadside fences require new modelling oftener than any others. The reason for this is not apparent. Undoubtedly it is to be found in the *peculiarities* of the case—some especial reason for each especial removal.

A few years ago, one of the towns in this Commonwealth chose an agent at a public meeting, whose duty it was to have all the fences in the town, on either side of the highways, moved back to the place assigned them by law; or what amounted to the same thing, this agent was directed to make the highways a *legal* width. He entered upon his duties; when behold it was found that a large majority of the land-owners in town, must take down their fences and walls, bordering on the road, and move them back, in some instances, a number of feet! Here was an unlooked-for discovery, and the agent was compelled, by the same public sentiment that gave him his office, to abandon the duties of that office. A similar experiment, undertaken in almost any farming community, would produce similar results. Every town ought to appoint such an agent, and then sustain him in the faithful discharge of the work assigned him.

Mean men there are in every community. Every form of meanness has its own peculiar style of manifestation. This common custom of robbing the highway is not only a meanness, but it is a crime—a theft really a robbery—a taking by one man of property which does not belong to him, but which does belong to the community.

Another instance of this same class of meanness and misdemeanors, we call to mind. It chanced, in the construction of highways, years ago, that three roads formed the three sides of a triangular piece of land, containing a little less than a quarter of an acre. This triangular piece of land was regarded as “common” land; no one held any title to it. Such bits of “common” land are often met in the country. This place in question was fenced in by a wealthy man, whose farm was near by, and cultivated as a garden. It is so cultivated and held at this time, by a man who can show no title to it whatever. The meanness of this act will be apparent, when it is stated that the roads on all three sides of this garden are illegally, inconveniently, and in some places, dangerously narrow.

So it happens that wealth and respectability are cloaks sufficiently large to “cover a multitude of sins.”—*Clinton Courant*.

AGRICULTURAL SOCIETIES.

VERMONT STATE AGRICULTURAL SOCIETY.—The annual meeting of this Society was held at Bellows Falls, on Friday, Jan. 3, 1862. The following gentlemen were elected officers for the ensuing year:

President—H. HENRY BAXTER, of Rutland.

Vice Presidents—Edwin Hammond of Middlebury; J. W. Colburn, of Springfield; Henry Keyes, of Newbury; John Jackson, of Brandon.

Recording and Corresponding Secretary—Daniel Needham, of Hartford.

Treasurer—J. W. Colburn, of Springfield.

Directors—Frederick Holbrook, of Brattleboro'; E. B. Chase, Lyndon; H. S. Morse, Shelburne; D. R. Potter, St. Albans; Henry G. Root, Bennington; David Hill, Bridport; John Gregory, Northfield; Elijah Cleaveland, Coventry; Nathan Cushing, Woodstock; George Campbell, Westminster.

Resolved, That the next annual Fair be held at Rutland, on the 9th, 10th, 11th and 12th days of September next.

Col. NEEDHAM, the Secretary, made a long report, full of interesting particulars and valuable suggestions. In him the members have found an intelligent and energetic officer.

MASSACHUSETTS HORTICULTURAL SOCIETY.—The Transactions of this Society for the year 1861 are before us. It has reports on *Ornamental Gardening*, on *Flowers, Fruits, and Vegetables*, all of which indicate research and show progress. A short report on the culture of *Polianthus Tuberosa*, commonly called *Tuberoze*, by Mr. E. W. BUSWELL, of Boston, is interesting, because he tells others just how to do the thing for themselves, and because “he looks upon flowers in general, and tuberoses in particular, as among the

necessaries of life, and as such is willing to labor for them.”

HINGHAM AGRICULTURAL AND HISTORICAL SOCIETY.—This young giant of a Society, only having been in existence since October, 1858, now presents us with a Book of its Transactions, of 200 pages, which—like all else it has done—is printed so as to reflect credit upon the Art. These Transactions have been compiled by the Rev. E. P. DYER, whose fine agricultural tastes have enabled him to present everything in an attractive light. Nothing is omitted that should be preserved, and no topic is presented at too great length. The awards of premiums are given in a compact form, and dinner-table speeches are considerably abridged. The book sparkles with wit and poesy, and is a model of its kind.

FRANKLIN COUNTY AGRICULTURAL SOCIETY.—At the recent annual meeting of this Society, Hon. H. W. CUSHMAN, of Bernardston, was elected its President, Mr. H. W. CLAPP, declining to serve longer on account of ill health. JAMES G. GRENNELL, Esq., of Greenfield, was re-elected Secretary and Treasurer. The Society cannot fail to prosper under the administration of such officers.

HAMPSHIRE SOCIETY.—This Society has recently erected a fine hall, which it is thought will prove an advantageous measure. Its officers are:

President—T. G. HUNTINGDON, of Hadley; *Secretary*—H. R. Starkweather, Jr., of Northampton; *Treasurer*—A. Perry Peck, of Northampton.

BERKSHIRE AGRICULTURAL SOCIETY.—The annual meeting of this society took place on the 7th inst. The officers elected are:

President—THOMAS COLT, Pittsfield; *Secretary*—John E. Merritt, Pittsfield; *Treasurer*—Henry M. Pierson, Pittsfield.

THE ONLY KNOWN USE OF CRINOLINE.—The fruit trees in my orchard-house have been much blighted this year; the tops of the young shoots curl up. I havt, I think, destroyed the fly now. Not being able to smoke the house in the ordinary way, I have used a lady's crinoline. I bought a cheap one covered with glazed calico, pulled it up round a pole, making it as close as possible. It is just the size to cover one of Mr. Rivers's miniature trees. I use a fumigator, and leave on the crinoline till the next morning. I then syringe the trees. The fly has no chance against the tobacco in so small a space; and the tree does not appear the worse.—*Cor. London paper*.

WE double all the cares of life by pondering over them. We increase our troubles by grieving over them. A scratch becomes a wound, a slight an injury, a jest an insult, a small peril a great danger, and a slight sickness often ends in death, by the broodin' fears of the invalid.

CULTURE OF THE TURNIP CROP.

It is believed by many that the culture of turnips as food for stock is unprofitable. In the hope of making it more attractive, we present the reader with some very beautiful engravings which we have had executed especially for our columns, of *Laing's* and *Skirving's Improved Purple-top Swedes*, and a cut of the common *White Globe Turnip*.

Like other crops, this may not be equally advantageous to all farmers, as something must always depend on the peculiar circumstances which surround each case. Under the ordinary circumstances in which our farmers find themselves, we believe that a portion of the crop of nearly every farm, should be in turnips, of some kind. This opinion is founded upon the personal practice of feeding turnips to stock for many years, and confirmed by the intelligent statements of others who have gained their opinions by a similar practice.

It is a mistaken opinion, we think, that makes the value of the turnip to consist merely in its amount of nutritive qualities, as compared with hay or grain. As well might we say that salt is unprofitable for stock, measured by the same test. The amount of nutrition in grass is small, compared with well-cured timothy or clover hay—yet none will say that the culture of grasses is unprofitable for our cattle. It is as much the alterative properties of the root that gives it value, as the nutritive properties which it contains, and probably more.



FIGURE 1.

The first of these turnips which we introduce, is *Laing's Improved Purple-top Swede*, which differs widely from the other varieties of Swedes, in

having large, entire, cabbage-like leaves, which, by their spreading, horizontal habit of growth, speedily cover the soil between the drills, prevent evaporation from the surface, and materially check the growth of weeds. It is very hardy, of a fine, globular shape, no neck, and rarely exhibits any tendency to run to seed in autumn. It grows to a good size, keeps well, and bears a very high character.

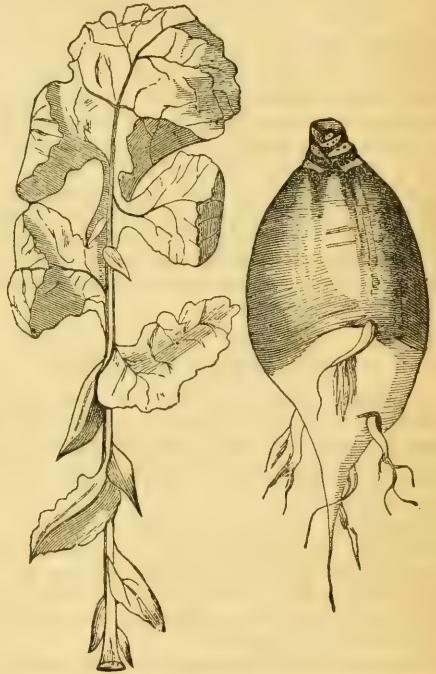


FIGURE 2.

The next is called *Skirving's Improved Purple-top Swede*. This is a well-known variety among our farmers. It was introduced into cultivation in England, in 1837-8. It grows fair, is a good cropper, comes early to maturity, and keeps well, when properly stored. The root is of an oblong shape, and grows higher out of the ground than the old sorts. This habit of growth renders it more readily injured by frost when left standing in the field too late. It is a beautiful plant while growing, is almost as smooth as glass, and the flesh is crisp, sweet and juicy. Cattle fed upon them once or twice are exceedingly eager to get them again.

The third is the common *White Globe*, and when grown on new land, in a favorable season, is as smooth as a baby's cheek. The bulb is globular, and skin perfectly white; moderately large head; neck fine and small, and tap-root slender. On soils quite rich, this variety has a tendency to develop itself to a great size, and to become woolly in texture. The flesh is sweet and juicy,

having less of that peculiar turnip flavor than the white, flat turnip, so common several years ago.

The turnip crop is of easy cultivation, and usually escapes the ravages of insects, the little black flea-beetle, which attacks the young plant and eats off the seed leaves, being its worst enemy. The culture of no one plant has had so decidedly a beneficial influence on the agriculture of England, as that of the turnip—and we cannot but believe, that when more attention is given to it in this country, so that we shall better understand its cost of production and its effect upon the stock to which it is fed, we shall find its extensive cultivation profitable.

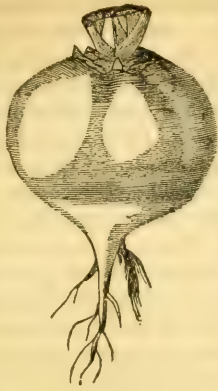


FIGURE 3.

POISONOUS PROPERTIES OF BRINE.

It may not be known to all that brine, in which meat or fish have been salted, is poisonous to domestic animals. If left in their way they will partake as freely of it as they will of pure salt, when it very often proves fatal. The *L'Union Médicale*, a French publication, gives an account of the researches of M. Reynal in regard to the poisonous properties of brine. From a series of experiments detailed, he draws the following conclusions:

First, That three or four months after its preparation it acquires poisonous properties.

Second, That the mean poisonous dose for a horse is about four pints; for the hog, one pint; and for a dog, four to five gallons.

Third, That in less doses it produces vomiting in the dog and hog.

Fourth, That the employment of this substance mixed with the food, continued for a certain time, even in small quantities, may be fatal.

We know from experience, says the *Valley Farmer*, that brine, if swallowed by hogs and other animals, will prove fatal, yet we doubt if the subject is susceptible of the definite results as stated by M. Reynal, for the degree of the poisonous properties of the brine depends on various circumstances. We have known a much less quantity to prove fatal than that stated above.

TO CURE SHEEP SKINS WITH THE WOOL ON.
—Take one tablespoonful of alum and two of saltpetre; pulverize well and mix together thoroughly. Sprinkle this powder upon the flesh side of the skin and fold together with the wool out; hang up in a cool place. In two or three days, as soon as dry, take down and scrape the flesh with a blunted knife till clean. This completes the process. Such skins make excellent saddle covers.—*Michigan Farmer*.

For the New England Farmer.

DOES FARMING PAY?

There are some things so self-evident that they do not admit of proof. Twice five makes ten, is a self-evident fact, and you may argue and talk about it as much as you please, and confusion will only be the result, and will not make the fact any more plain than its simple statement. Now it strikes me pretty much in the same way, in regard to the profits of farming. The latter may not be so plainly self-evident as that twice two are four, but the fact that farmers, as a class, make a profit, are good livers, solid men, and enjoy as many of the rational comforts of life as any other class, and many more than some, is so very self-evident to any one who will investigate the matter and thoroughly inform himself on the subject, as hardly to need comment.

In an article published in last week's *Farmer*, I called the attention of its readers to this matter, and the subject is renewed at this time because the other day, in a conversation with one of our farmers, he called in question its statements. The fact is, we are so accustomed to some, very many, of our every-day blessings, that we do not appreciate them, or the enjoyments and comforts which they afford us, until we are deprived of them. It is something so in regard to farming and its profits. Even at the present day, in this enlightened nineteenth century, of Rebellion and War—when the roar of the Lion comes across the waters to frighten *fools*—many farmers look upon their calling as low and vulgar, and themselves as inferior to men in other callings, and are constantly grumbling about the hard times, poor crops and a non-paying business.

Now the fact is, all this class of men are doing as well by farming as they would at anything else—doubtless, far better; as it is, perhaps they rub and go; they are not the kind of men to succeed in anything and make it a successful and profitable business. My friend, the farmer, brought up the fact that during the past season he made a visit to his native town, Middleboro', and he visited a number of farmers, who, in his boyhood, had fine, flourishing farms, but now a number of them are deserted, run down; and once cultivated fields are in wood or pasture; and the majority are not so good, and would not bring to-day, in money, what they would thirty or forty years ago. And he asked the question, What is the cause of this, if farming is profitable; why did not the sons of the fathers stick by the old folks and farm, instead of going to other callings and getting rich? His answer was, Because farming was not profitable, or they would have continued to carry them on.

It would take too much space and time to answer my friend, and such as reason like him, and though his question looks fair and legitimate, yet any one who will inform himself can see that it really is not so, and is not a valid argument to bring against the profitableness of the business of farming. This question was very fully discussed about a year ago in the columns of the *Farmer*. I should be glad to have some of its intelligent farmer readers take up the question again and discuss it in a thorough and systematic manner, that our young men may clearly see what all progressive, go-ahead farmers declare, that farming, prop-

erly carried on, will pay six per cent. on the capital invested, and not unfrequently a much larger interest. A business which does this, a sane man ought to be satisfied with. Suppose farmer Sheldon take this matter up, and tell the young men of New England how to manage a farm to have it pay lawful interest on the cost, leaving out the "fancies."

N. Q. T.

King Oak Hill, 1862.

For the New England Farmer.

ASHES OR LIME AS A FERTILIZER.

Inquiries have been made into the causes of the fertility and barrenness of land, the food and nutriment of vegetables, the nature of soils, and the best modes of ameliorating them with various manures.

Ashes for top-dressing operate very favorably upon exhausted soils; many of which produce nothing but white top or June grass.

I have a knoll on my farm that produced a small crop of white grass; I thought I would try to renovate it by top-dressing with ashes. I spread on it at the rate of one hundred bushels of leached ashes to the acre. The second year after spreading, the white grass was completely subdued, and its place supplied with a thick, heavy crop of clover and timothy.

White grass is of spontaneous growth, and flourishes best where the land is most deficient in carbon and lime. A proper proportion of ashes, spread broadcast or plowed in, will restore it to its original state of productiveness. Ashes is the best fertilizer on such land, because it replenishes the soil with every ingredient of which it is the most deficient.

Lime in a heap composed of meadow muck and animal manure, after being thoroughly pulverized, when applied to the soil, will very nearly supply the deficiency of salts, and produce satisfactory results. The use of lime in agriculture may be attributed to its property of hastening the dissolution of all animal and vegetable matter, and of imparting to the soil a power of retaining a quantity of moisture necessary for the nourishment and vigorous growth of plants.

J. W.

East Sullivan, N. H., Dec. 28, 1861.

TO PREVENT TOOLS FROM RUSTING.—Thousands of dollars are lost each year by the rusting of plows, hoes, shovels, etc. Some of this might be prevented by the application of lard and resin, it is said, to all steel or iron implements. Take three times as much lard as resin, and melt them together. This can be applied with a brush or cloth to all surfaces in danger of rusting, and they can easily be kept bright. If tools are to be laid by for the winter, give them a coating of this, and you will be well repaid. It can be kept for a long time, and should always be on hand, and ready for use.

WEDGES REBOUNDED.—Take a piece of dry bark and set in the opening, then set in the wedge anew, so as to split this piece of bark, and it will prevent any further trouble. So says the *Country Gentleman*.

LEGISLATIVE AGRICULTURAL SOCIETY.

[REPORTED FOR THE FARMER BY D. W. LOTHROP.]

The second meeting of the series was held at Representatives' Hall, on Monday evening last. The subject for discussion was *Agricultural Education*, and His Excellency Gov. ANDREW being present, as was expected, was called to preside.

He observed that his studies were not compatible with the culture of the earth, and, compared with many others present, he was ignorant of farming. But he possessed a love for the soil, and such a regard for mother earth was generally innate in the hearts of all men. Men are easily brought back to the old homestead, and youth who come to the city or bustling town delight to retire and contemplate the scenes of their childhood, and enjoy the rich and varied beauties of nature. Generally speaking, all men are real or prospective farmers. In alluding to the strong desire of some young persons for general and scientific information, he spoke of a young man who sent to him from the country for a grammar and dictionary of the Sanscrit language! Passing to the soil, the Governor spoke of farming as it was years ago, in Cumberland county, Maine—the scene of his early childhood—and repeated a humorous distich of an old farmer in regard to the poorness of his land. There were only three orchards in the place, and the fruit of those very poor. But the impediment to farming in Maine was, that the farmers were but half-farmers, part of their time being devoted to the lumber business. Hence the difference to be seen between their farms and those of Worcester county in this State; and he concluded that a farmer's time should not be divided. He also alluded to a clergyman in the State of Maine, who, with but a small and rather sterile piece of land, containing an apple orchard, had, by dint of attention to it, made it a source of income, and was enabled thereby to send a son to College. But the general features of agriculture in that State had greatly changed for the better, as he had had occasion to observe after an absence of twenty-five years. Now the farmers have good fences, painted barns, more orchards, and more highly cultivated soil. And this is the result of books, newspapers and debating clubs, where the mind is sought to be improved as well as the crops. Nothing touches life at so many points as agricultural education, for we are all directly or indirectly connected with the soil. That was the truest political economy which gave a large number of farmers, without which a nation cannot be strong in war nor independent in peace. A nation of shop-keepers could not stand against the rest of the world. The Governor concluded by observing that he hoped he might have excited a spirit of discussion upon this important subject, as every man owes a debt to the earth that sustains him.

Dr. LORING, of Salem, being called upon, said that he came as a learner, not as a teacher. He remarked that the proper basis for agricultural education in New England was the introduction into our schools of some elementary work on agriculture, and this would tend to make it attractive to the rising generation. We have done much in New England by books, periodicals, &c., and they should not be lost sight of. And we should not forget what the Commonwealth, and what agricultural societies have done. He commended the *Agricultural Manual*, published by the recommendation of the Massachusetts Agricultural Board, and said it contained much matter for farmers in a desirable form. He was not prepared to advocate agricultural colleges, yet they may be serviceable in England, where capitalists require bailiffs to superintend their farms. Our farming organization is so different from that of Europe, that such large institutions would be of doubtful utility with us, at present, at least. He spoke of the importance of learning from books, as farmers were slow to give and transmit traditionally their experience, and related some facts in illustration. He impressed the idea that agriculture need not be drudgery, and that it can be made superior to all vocations, required much thinking, and was more difficult to pursue than the various mechanical trades.

Mr. WHITE, Secretary of the State Board of Education, being called upon, said he did not feel competent to speak upon the practical part of farming, though interested in general education. He related the anecdote of a painter, who, when asked what he mixed with his colors to make them so superior, replied "Brains!" And, said the speaker, this is what we should mix with manure! Education underlies all that is important in life, and introduces real wealth. Broad farms decrease with wealth and population, and men narrow their bounds, and by the aid of science, cultivate downwards—into the earth. Scratching the soil will not do; we must go deep and mix brains with our operations. He thought all the great business operations of life should be begun early to be well understood, and to secure success, and of course farming was included. Every man owns land or expects to, as all have an interest in it. The introduction of agriculture into our schools as a study—besides being useful otherwise—would have a religious bearing and influence. Farming is a religious occupation—one of obvious dependence upon God; and the tillers of the soil should be the best educated, as with them lay the broadest field, on which and with whom he hoped to end his days.

Mr. FLINT, Secretary of the Board of Agriculture, being invited to speak, said he had given the subject much thought, and that it was no less im-

portant than broad. The practical question is, what is the best way to educate? Newspapers and Societies had done very much. He was not opposed to an agricultural college, at a proper time, but we must begin at the beginning. The great utility of expensive manual labor schools and colleges in Europe was doubtful, and by some, these institutions had been pronounced failures. The agricultural colleges of this country are yet experiments. For a further expression of his views, Mr. Flint read from a report of a committee to the State Agricultural Board, published in the Massachusetts Agricultural report of 1859, page 130; also from the *Ohio Farmer*, showing the importance of the introduction of agriculture into our schools, the pleasure its varied subjects would give, the failures it would prevent, &c. This would be beginning at the foundation.

Mr. NORTHROP, Agent of the Massachusetts Board of Education, being called upon, said agriculture should be taught early. In our schools we should not give books so much as things and facts. There was a growing thirst for knowledge, as stated by His Excellency the Governor, and we should teach children to reflect. They should see and feel the natural objects of their studies as much as possible. Plato used to say he regretted the art of writing; and we might almost regret the art of printing. Books were the art of man—nature the art of God. Farming was good education for the mind, and best to develop the imagination.

Mr. DEWITT, of Agawam, had some views rather counter to the previous speakers. He thought the *Agricultural Manual*, if introduced into our schools to be taught to boys under 16 years of age, would fail in five years. In seminaries and with older children, it might perhaps be of more use.

Mr. WHITE replied that he had reference to higher classes.

Mr. DAVIS, of Plymouth, had read the *Manual* carefully, and thought that all persons might be enlightened by it. He illustrated the importance of education in farming, by stating some facts about the growth of timothy grass with its bulbous root. He spoke also of the large mammoth agricultural institution recommended by Dr. Hitchcock, with more professors than Harvard College, but said it would not do. Let us teach agriculture in our ordinary schools, and rise by gradation, and by and by we may attain to a county school, such as has been by some recommended.

Mr. SEARS, of Yarmouth, said he did not think the scholars were too young in our common schools to study agriculture, and he would have it there taught. Young boys have more ideas of life than we imagine.

Mr. CAPEN, of Boston, spoke generally and earnestly upon the subject, alluding, among many

other things, to the prejudice in some of the Western States against educated farmers. He thought the farmer could find little or no useless learning, and advocated his studying the Latin and Greek classics, and in fact the classics of all nations, English, French, German, &c.

The time for closing the meeting having passed, Gov. Andrew announced the subject for discussion at the next meeting—*Crops, and the Profits and Economy of their Cultivation*. Adjourned.

For the New England Farmer.

INJURED APPLE TREES.

MR. EDITOR:—I saw an article in your paper from your New Bedford correspondent respecting the loss of his Baldwin apple trees.

He undoubtedly grew them too fast. When they grow fast, they grow later in the fall, hence the danger of growing them too fast.

In the winter of 1830-31, thousands of apple, peach and cherry trees were killed. There was no frost to stop their growing, and on the first or second day of December it froze up tight; the sap being up, it started the bark and killed thousands of the finest growing trees, and those that grew the most suffered the most.

Some months since, your Sandy River correspondent made inquiry of the reason of his apple trees having been injured on the south side. I have never known apple trees that were properly cared for and judiciously managed, to be injured on the south side. But I have known the difficulty take place, and as I have supposed, from three causes.

1. From want of nourishment; the body of the tree being exposed to the sun, I have supposed the heat of the sun penetrated through the bark and dried it so as to stop the flow of sap, and the worms always get in.

2. Cutting off too much; the same difficulty takes place from an overflow of sap.

3. When the sprouts are allowed to fill up the top or middle of the tree, the top branches are deprived of nourishment, and the same difficulty takes place. I have merely stated the reasons, as they have appeared to me, as the cause of the difficulty spoken of, but I cannot say that I am sure of it.

DANIEL LELAND.

East Holliston, Dec. 26, 1861.

AMERICAN POMOLOGICAL SOCIETY.—We learn, says the *Journal*, that the President of this national association, Hon. Marshall P. Wilder, has appointed September 17, 1862, for the commencement of its ninth session, which is to be held in Boston. This institution was established in the year 1848, and has held meetings in the cities of New York, Boston, Philadelphia, Cincinnati and Rochester, and has exerted a powerful influence in systematizing and advancing the science of Pomology throughout the Union. In conjunction with this appointment, the Massachusetts Horticultural Society have ordered its annual exhibition for this year to take place on the same week.

EXTRACTS AND REPLIES.

CULTURE OF WHITE BEANS.

Will some of your kind contributors be good enough to give me a little (or a good deal) of information in regard to the cultivation of white beans on the following points, viz:

1. Are they a tolerably certain crop?
2. From what causes are they most liable to suffer injury?
3. What kind of soil is best adapted to them?
4. What is the most approved method of culture?
5. What is the average yield from a bushel of seed?

This, perhaps, is asking a good deal; if so, please excuse it. I have never taken the liberty before, but while my hand is in,

6. I must ask you, as a further favor, to give me the title of a standard work on farming—one that will be a real help to a new beginner.

A SUBSCRIBER TO MONTHLY.

Jan. 15, 1862.

REMARKS.—1. White beans are very susceptible to frost—aside from this, they are as sure a crop as any we cultivate, when properly managed.

2. From poor land, want of manure and proper cultivation. The almost universal practice is to crowd the white bean crop off to some arid sand plain, or gravelly knoll, the poorest piece of land on the farm, throw in a little chip dirt or something equivalent, and then expect a crop of beans! Fortunately, such expectations are not often verified. On a proper soil, with generous manuring and good attention, a paying crop of white beans may always be expected. When planted early and kept rapidly growing they will rarely be injured by autumnal frosts—indeed, they will usually be fit for harvesting in August. We are not aware that they are injured by insects of any kind excepting the grub or cut-worm which sometimes attacks them. Sometimes a slight rust takes them, but not often, in our climate.

3. The soil best adapted to their growth is a rich gravelly or sandy loam. In England, it is said, strong clay soils and heavy marls are best—and those may be good if thoroughly drained—but here we think any of our good Indian corn land is best. The sandy barrens where they are usually placed, are no better for beans than for our other farm crops. If they are highly manured, and the season is a moist one, a good crop would probably be the result.

4. Plant in hills or drills, and leave the rows two and a half or three feet apart, so as to allow of their cultivation with the horse. If the soil is good, and well manured, great care must be observed not to *seed too highly*. If in drill, the plants should not stand nearer than six inches of each other—and if in hills, three or four plants are enough.

5. Do not know. On such land, and with such

attention as we have spoken of, an acre ought to bring twenty-five bushels.

6. The *Farmers' and Planters' Encyclopedia*, as a single book, is the best we are acquainted with; but this must be used cautiously, as much of it relates to English practices and climate. Buel's *Farmer's Companion* and the *Manual of Agriculture*, just prepared by Messrs. EMERSON and FLINT are also excellent works.

A BARN CELLAR OUTSIDE.

I intend to build a barn on steep land, with a cellar outside to keep roots, over which I intend to have a cart road to a high floor. Will a coating of water-lime cement make it water proof, and save the planks with two or three feet of earth,

WM. F. GIBSON.

Ryegate, Vt., Jan., 1862.

REMARKS.—We should think not. The cement might prevent the water from percolating through to the planks, but the moisture of the cellar would keep them damp—unless with a complete system of ventilation—which would eventually rot and ruin them. Can you not throw one or two stone arches over the cellar, and thus make permanent work of it? Would not such work be cheaper in the end?

SALES FROM SHEEP.

Will you please ask Mr. Nathan Bottum, of Shaftsbury, Vt., to inform us how his sales from 175 sheep amounted to \$2000?

Jan. 1, 1862.

WILLIAM B. WARD.

MOLES AND WOODCHUCKS.

I wish to ask through the *Farmer*, what is the best way to get rid of moles and woodchucks?

Hatfield, Jan. 1, 1862.

FARMERS' HIGH SCHOOL.

We have before us a catalogue of the Officers and Students of the *Farmers' High School of Pennsylvania*, for the year 1861. The college year of ten months will commence about the middle of February next. The Faculty says:

The student has an opportunity of seeing all the practical operations of the farm, garden and nursery, in the most approved manner, with the use of the best manures, seeds, tools and implements; and, what is of more importance than this, he studies in the class-room and laboratory the scientific principles involved in all he does, and by becoming a scientific man and analytical chemist, he is enabled to protect himself and others against the frauds and cheats that are continually being practised upon the uneducated, by dealers who are themselves either ignorant of science, or use it to impose upon the community. He learns how to study the geology, mineralogy and chemistry of the soil he cultivates, the botany of the plant he grows, and the laws of health and diseases of the animals he uses.

In a word, he is made thoroughly acquainted

with the laws and phenomena of the material world with which he is in immediate contact, a knowledge of which is essential to their material success, or intellectual pleasure, in the pursuit of the duties of rural life.

Those desirous of learning more of the institution, may do so by addressing Dr. E. PUGH, Farm School, Penn.

WINTER-TIME.

Though Winter reigns, Beauty still holds her throne;
She moulds the snow-flake to its lovely form,
And the few crinkled leaves that mock the storm,
And laugh and chatter while the sad winds moan,
Beauty hath stained with mingled gold and brown.
The patches of bright sky between the showers,
The robin's breast, and moss-floors of lone bowers,
For naked trees and funeral-clouds atone.
Beauty dies not, she walks through forest dim
With feathery feet, when the strange cuckoo-note
Like a friend's voice on the calm air doth float,
And lisping zephyrs chant Spring's advent-hymn;
With the swart Summer and brown Autumn dwells;
And marries Winter in the ice-flower dells.

AMERICAN SOCIETY.

In America, even more than in Europe, there is but one society, whether rich or poor, high or low, commercial or agricultural; it is everywhere composed of the same elements. It has all been raised or reduced to the same level of civilization. The man whom you left in the streets of New York, you find again in the solitude of the far West; the same dress, the same tone of mind, the same language, the same habits, the same amusements. No rustic simplicity, nothing characteristic of the wilderness, nothing even like our villages. This peculiarity may be easily explained. The portions of territory first and most fully peopled, have reached a high degree of civilization. Education has been prodigally bestowed; the spirit of equality has tinged with singular uniformity the domestic habits.

Now it is remarkable that the men thus educated are those who, every year, migrate to the desert. In Europe, a man lives and dies where he was born. In America, you do not see the representative of a race grown and multiplied in retirement, having long lived unknown to the world, and left to his own efforts. The inhabitants of an isolated region arrived yesterday, bringing with them the habits, ideas and wants of civilization. They adopt only so much of savage life as is absolutely forced upon them; hence you see the strangest contrasts. You step from a wilderness into the streets of a city, from the wildest scenes to the most smiling pictures of civilized life. If night does not surprise you, and force you to sleep under a tree, you may reach a village where you will find everything, even French fashions and caricatures from Paris. The shops of Buffalo or Detroit are as well supplied with all these things as those of New York. The looms of Lyons work for both alike.

You leave the high road; you plunge into paths scarcely marked out; you come at length upon a plowed field, a hut built of rough logs, lighted by a single narrow window; you think that you have at last reached the abode of the American peasant; you are wrong. You enter this hut, which looks

the abode of misery: the master is dressed as you are; his language is that of the towns. On his rude table are books and newspapers; he takes you hurriedly aside to be informed of what is going on in Europe, and asks you what has most struck you in this country. He will trace on paper for you the plan of a campaign in Belgium, and will teach you gravely what remains to be done for the prosperity of France. You might take him for a rich proprietor, come to spend a few nights in a shooting-box. And, in fact, the log-hut is only a halting place for the American—a temporary submission to necessity. As soon as the surrounding fields are thoroughly cultivated, and their owner has time to occupy himself with superfluities, a more spacious dwelling will succeed the log-hut, and become the home of a large family of children, who, in their turn, will some day build themselves a dwelling in the wilderness.—*Alexis de Tocqueville.*

SOW SPRING WHEAT EARLY.

"My experience teaches me," says a correspondent of the *Wisconsin Farmer*, "that we must sow our wheat as early as possible. There is hardly any danger of sowing too early. Two years ago I sowed a small piece in Canada club spring wheat on the 5th day of April. That piece yielded 33 bushels to the acre in that poor season. The berry was plump and heavy, weighing 61½ pounds to measured bushel. I continued to sow, as the rains and state of the ground would allow, having but one team, until about the first day of May, and I must say that just in proportion to the date of sowing were the amounts and quality of the crop, the piece which was sown and harrowed the last day of April being badly rusted and not yielding over eight or nine bushels of poor shrunken wheat per acre, while that portion of the field covered about the 10th of the same month, turned out between twenty-five and thirty bushels of very marketable grain. The piece sown about the 18th and 20th of April was not so good as that sown before, yet far better than the last sown."

In connection with these remarks, we will add that of the two wheat crops submitted last year to the Essex County Agricultural Society, one was sown April 7th, and the other, "when the harrow struck the frost." The premium of \$8 was awarded to Mr. Paul Pearson, of Newbury, for his crop of wheat, at the rate of 35 bushels to the acre. Pretty good crop for old Massachusetts.

THE ladies are introducing a new and beautiful ornament for the parlor mantle, or centre table. They take large pine burs, sprinkle grass seed of any kind in them, and place them in pots of water. When the burs are soaked a few days, they close up in the form of solid cones, then the little spears of green grass begin to emerge from amongst the laminae, forming an ornament of rare and simple beauty.

ACUTE FOUNDER IN HORSES.

We find the following in that excellent little work, *The Horse Owner's Guide*:—

An inflammation of the laminae of the foot, originating in too hard work, or caused by cold. This disease is not confined to the hoof alone, but spreads over the sensible laminae or fleshy plates on the front and sides of the coffin bone. It is always accompanied by fever.

H. R.—*Aconite*—If there is inflammation, 6 drops every one, two or three hours.

Bryonia—When the limbs are stiff and the joints swollen, 6 drops every two hours. Veratrum, if it is brought on by violent exercise, same.

A. R.—Cold applications, and still better to put the horse in running water. If very violent, bleed the jugular and feet, two or three quarts.

FOUNDER, CHRONIC.—This is a species of founder that produces less severe lameness than acute founder.

H. R.—*Aconite*, *arsenicum*, with increased pain. *Rhus tox.*, if there is a change for the worse after some exertion.

We suppose the letters "*H. R.*" and "*A. R.*," mean homœopathic and allopathic remedy.

For the New England Farmer.

HINTS FOR THE SEASON.

MR. EDITOR:—Allow me to remind your readers who are not prepared to use their sugar orchards to their full capacity, that arrangements should now be made to procure buckets, storage, &c., that no time may be lost when the sugar season arrives.

At present prices—and there appears to be no prospect of any diminution very soon—there is no more profitable branch of farming.

Don't forget to throw on a few of the best brush for pea supports while getting the year's supply of fuel, and have them sharpened and laid aside in a convenient place for use next spring.

It makes winter more cheerful to hang up a few bits of fat meat where the chicadees can feed upon them and be safe from "puss." If there is no tree or shrub near the window, a small spruce or fir tree in a sheltered corner will afford a double gratification when stocked with such "fruit."

WM. F. BASSETT.

Ashfield, Jan. 13, 1862.

CULTIVATION OF COTTON IN THE FREE STATES.

—The Commissioner of Patents has issued a Circular, in which he says the cultivation of cotton in the middle portion of the Free States is beginning to attract attention. To prevent failures in its cultivation, it is proper to remark that it is a principle in vegetable physiology that tropical plants can never be acclimated North, except by a repeated reproduction of new varieties from the seed. The attempt to grow Sea Island cotton, such as is now brought from Hilton Head, would

prove a failure in any portion of the Free States. The only variety capable of successful cultivation in those sections now seeking its introduction, is the green seed cotton, such as is now being raised extensively in Arkansas, Missouri, Tennessee, and portions of Kentucky, which produces the white fibre. The seed should be obtained from these localities. The modifications of soil and climate will influence the size of the plant, the length and fineness of the fibre, and the product of the crop. No reasonable doubt is entertained of the success of the culture in all the mild portions of the middle States, and efforts are now making by this division to procure the proper seed for distribution. The Commissioner further says the cultivation of sorgho the past year settles the question of its entire practical success, and that one of the difficulties presenting itself is the want of pure seed. To meet this want, this division has ordered seed from France for distribution this ensuing spring.

REMEDY FOR RINGWORMS.—The *North British Agriculturist* says that the disease locally known as ring worm or tetter, which shows itself about the head and neck of young cattle, in the form of whitish dry scurvy spots, can be removed by rubbing the parts affected with iodine ointment. The disease may also be combated by the use of sulphur and oil; iodine ointment is, however, to be preferred. As this skin disease is easily communicated to the human subject, the person dressing the cattle should wash his hands with soap and hot water after each ointment.

LADIES' DEPARTMENT.

For the New England Farmer.

IMPROVEMENT IN SOUPS.

MR. EDITOR:—The Neapolitans always add grated cheese to Bouillon, macaroni and vermicelli soups, and thus very much enrich them in flavor and nutritive value. An insipid soup may thus be at once rendered quite palatable, and if crumbs of toasted bread are added, quite a substantial dish may be made of it. Those of your readers who wish to practice economy at the table, —and I presume there are many such—will find they can save at least half the meat they would otherwise consume, by introducing a good soup at their dinners. The making of soup from the bones of the previous day's dinner is well known to all housekeepers, though all do not know how to make the most of these materials. We will here merely suggest the trial of the one additional article above named, as it may be put in by those who like it; the grated cheese being placed on the table, a comparison of the soup with and without the cheese may be readily instituted. From one to two tablespoonfuls of grated cheese to a plate

of soup is the proportion. Try it once, and you will be sure to repeat the experiment. Pieces of cheese that have become dry may be used up to great advantage. The Neapolitans use parmesans, but any cheese will answer—we like the Dutch, for this purpose, as it is dry, salt and high-flavored. The French highly value soups, and many of the poorer classes have hardly any other food than soup and bread.

One of the reasons why this diet has so little popularity among us is, that few cooks know how to make a good, palatable and nutritious soup, especially when they are limited to mere bones and vegetables for a basis. The story of the delicious soup made by a Frenchman with what appeared to one of our countrywomen as nothing more than a couple of pebble stones, she having loaned him the pot and supplied him with a few bones and condiments, illustrates what may be done with slender means when the cook understands his or her business. It will be remembered that the Frenchman presented the good woman with the pebbles, which she continued ever after to use as the basis of the soup, for the composition of which she was indebted to the example of her poor visitor.

C. T. I.

TO ROAST BEEF.—Rib roast is that part where the ribs commence, on the fore quarter to the back of the ox. The first two or three are called the first cut, the next two or three the second cut; these two cuts are the best to roast. Cut off all the bones, and saw the ribs in two places, carefully peel or cut off all soiled or dirty places, if any, then wipe it all over with a clean cloth wrung out of cold water. Then rub it all over with fine salt, put it in the pan to roast with not too strong a fire to burn it. In half an hour take it out and drain the gravy into a bowl, baste it over with the fat, and dust on flour all over the meat; this must be done every half hour, until the meat is roasted, which will keep the gravy from being burnt. Take up the meat, skin off some of the fat from the top of the bowl and pour it into the pan, dust in some flour, let it boil, and stir it until it thickens.

A roast of ten pounds will take about two and a half to three hours to cook. If you roast before a fireplace, you can let the gravy remain in the pan.

A sirloin of beef, or a loin of veal, can be roasted in the same way. In the sirloin of beef, the suet must not be roasted—it will spoil the gravy.

CLEANING SILK.—The following is said to be an excellent recipe for cleaning silks: Pare three Irish potatoes, cut them into thin slices, and wash them well. Pour on them half a pint of boiling water, and let it stand till cold; strain the water and add to it an equal quantity of alcohol. Sponge the silk on the right side, and when half dry, iron it on the wrong side. The most delicate colored silk may be cleaned by this process, which is equally applicable to cloth, velvet or crape.

PROLONGING THE BEAUTY OF CUT FLOWERS.—A recent author, E. A. Maling, states that for keeping flowers in water, finely-powdered charcoal, in which the stalks can be stuck at the bottom of the vase, preserves them surprisingly, and renders the water free from any obnoxious qualities. When cut flowers have faded, either by being worn a whole evening in one's dress, or as a bouquet, by cutting half an inch from the end of the stem in the morning, and putting the freshly trimmed end instantly into quite boiling water, the petals may be seen to become smooth and to resume their beauty, often in a few minutes. Colored flowers, carnations, azaleas, roses and geraniums, may be treated in this way. White flowers turn yellow. The thickest textured flowers amend the most, although azaleas revive wonderfully. The writer has seen flowers that have lain the whole night on a table, after having been worn for hours, which at breakfast next morning were perfectly renovated by means of a cupful of hot water.

STEAMED BROWN BREAD.—Take two quarts of sweet skim milk, one tablespoonful of saleratus, one of salt, half a cup of molasses; put in equal quantities of rye and Indian meal until the dough is as stiff as can be conveniently stirred with a spoon, then put it in two two-quart tins. Place sticks across the bottom of the kettle to keep the water from the bread; place one of the tins on these, and the other in a tin steamer placed on the top of the same kettle, and let it steam three hours. Care should be taken to keep the water boiling, while the bread is cooking. When done, put it in a warm oven long enough to dry the top of it, not bake it. Yeast can be used instead of saleratus, if any prefer it, but the bread must rise well before putting it in the kettle.—*Selected.*

BLEACHING FLOWERS.—Light is as much a necessity to the healthy development of plants, as is a due supply of heat and moisture. In darkness, the green coloring matter, "chlorophyl," can not be developed. Advantage is taken of this circumstance in the bleaching of salads and vegetables, and the same process is now being applied to flowers. It appears that in Paris there is a great demand for white lilacs for ladies' bouquets in Winter, and as the common white lilac does not force well, the purple "Lilas de Morly" is used. The flowers of this variety, when made to expand at a high temperature, in total darkness, are of a pure white; those of the Persian lilac will not whiten. *London Review.*

YEAST.—A baker in the army, celebrated for his excellent bread, gives the following receipt for making yeast: Boil one pound of flour, one-fourth pound of brown sugar and a little salt, in two gallons of water, for one hour. When milk warm, bottle and cork it close. It will be ready for use in twenty-four hours.

THE CATTLE MARKETS FOR JANUARY.

Believing that a brief summary of the weekly reports of the cattle markets will be convenient for reference and comparison, we publish the following abstract for January, and propose to give similar tables for each month during the year.

NUMBER AT MARKET.				
	Cattle.	Sheep.	Shotes.	Live Fat Hogs.
January 2.....	1053	2600	500	2500
" 9.....	1964	3428	250	2000
" 16.....	1332	3328	100	1800
" 23.....	1084	2058	300	2000
Total for Jan.....	5433	11414	1150	8300

PRICES.

	Jan. 2.	Jan. 9.	Jan. 16.	Jan. 23.
Beef cattle, 4 th lb.....	4½ @ 7c	4½ @ 6½	4½ @ 6½	4½ @ 6½
Sheep, live weight.....	4½ @ 5½	4½ @ 5½	4½ @ 5½	4½ @ 5½
Swine, stores, wholesale.....	3 @ 4	3½ @ 4½	4½ @ 5½	3½ @ 4½
Stores, retail.....	4 @ 5	4 @ 6	5 @ 6	4 @ 6
Live fat hogs.....	4½ @ 4½	4½ @ 4½	4 @ 4½	3½ @ 3½

REMARKS.—Many more of the Western than of the Northern cattle are thoroughly fattened, consequently but few of the latter sell at the highest prices quoted, which are those for extra beeves. A few, and but a few Northern oxen, were sold for over 6c per lb. at the two last markets in January.

Working oxen and stores have not changed much in price during the month, otherwise than as their value has been affected by the price of beef, for which most of this class of stock has been purchased for the last four weeks. The range of our quotations is from \$60 to \$140.

Milch cows have sold better, perhaps, than most other kinds of stock, but at a very wide range of prices, say from \$20 to over \$50.

THE ERUPTION OF MT. VESUVIUS.

A whirlpool, some three hundred and sixty feet in diameter, has been formed in the sea near Torre del Greco, by the late eruption of Vesuvius. The sounding gave twenty-three fathoms of water, and the plummet brought up sand and sulphur. From a part of the circumference a tail, so to call it, about sixty feet in width, runs away in the direction of Sorrento, and is of a beautiful light green color. All the water here was tepid, had a strong sulphurous smell, and many fish have been destroyed. The eruption of Vesuvius appears to be increasing at latest dates instead of subsiding. There are eleven craters above Torre del Greco, all emitting sulphurous vapors, and the largest is from seventy to eighty feet deep and one hundred feet wide. From this point, after heavy rumblings and heaving of the surface, the ground was split open, and a fiery fissure was made almost to the outskirts of the city, through which the dread unseen power passed, opening the streets and laying bare some parts of the former buried town, and then running into the sea. Strangers are coming from all parts of Europe to Naples to behold Vesuvius in its glorious burning and devastating anger.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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OFFICE...100 WASHINGTON STREET.

SIMON BROWN EDITOR.
HENRY F. FRENCH, ASSOCIATE EDITOR.

SUGGESTED BY THE MONTH OF MARCH.

"MARCH, March, Mars was your god-father,
Therefore, betimes you can bully and bluster."



MARCH, the third Month in the year, according to our calendar, had the honor of being first in the early Roman calendar, and it also marked the commencement of the year in some of the nations of Europe, till the eighteenth century. — The English legal year began March 25, until the change

of style in 1752. But whether counted as the first, or as the third month of the year, its character for fickleness has ever been proverbial.

With us it is the turning point of the season—a sort of battle-ground for the elements. Cold and heat, rain and snow, strive for the mastery,—now one and now the other obtaining temporary dominion. The English have transmitted to us a proverb to the effect that if March comes in as mild as a lamb, it will go out as rough as a lion, and *vice versa*. The Scotch have a saying, when the last three days of this month are stormy, that March borrows them of April, and that,

"The first it shall be wind and weet;
The next it shall be snow and sleet;
The third it shall be sic a freeze,
Shall gar the birds stick to the trees."

Another proverbial slander on the character of this month—and one of New England origin undoubtedly—is the accusation of its affording six weeks' sledding! And yet, after all that has been

or may be said against this month, we would most heartily adopt—changing a single word,—the expression of a celebrated poet, and say,

"Old March, with all thy faults, I love thee still."

It is the month in which our plans for the season's operations should be matured, and in which all should be attempted which it is possible for us to prepare for the brief period into which Spring's work is crowded in our climate. While it is true that more or less may generally be done that shall directly forward the important business of the approaching season, March is nevertheless the grand *make-ready* month of the year, and our "good luck" during the whole season may hinge on the use we make of the thirty-one days that come one after another, between February and April.

The doctors have a proverb, that "to know the disease is half its cure." Whether it will do for farmers to adopt a similar sentiment, by saying to know our wants or needs is half their supply, we all know by sorry experience, it will do for us to say, that there is often much lost in a driving time by want of such preparation as might have been made at a more leisure season. Shall the same lesson be again repeated by the same old schoolmaster? Has not his tuition been rather expensive? And had not we better try the cheaper system of "a stitch in time saves nine," this year, beginning, if we can find nothing better, with the ancient problem of taking time by the forelock.

Having carefully decided not only what fields shall be cultivated, but what crop shall be grown on each lot, and how manured and worked, we shall not be likely to forget the preparation of all the seeds we intend to plant. Nor will the tools and implements be forgotten. Each one should be carefully examined, and if found out of order, or in any way unfit for service, now is the time to repair it, or procure a newer, and if possible, a better one.

But by whom shall these repairs be made?

Our attention has been directed to this subject by reading an article recently published in one of the most popular agricultural papers of the country, in which the writer very strongly advises farmers to fit up a convenient shop, and procure the necessary tools for making these repairs themselves. The main argument adduced in favor of this course, and one several times repeated, was to the effect that by this arrangement employment would be furnished to the farmer and his boys during odd hours and rainy days. This, somehow, stirred up in our minds recollections far more vivid than pleasant of the "odd hours and rainy days" of our own boyhood. We thought then, and a slight sprinkle of gray hairs has only deepened the conviction, that boys are sometimes worked too hard upon the farm. That there always has been danger of this being done is evident from the proverb,

"All work and no play, makes Jack run away."

Another thought occurs to our mind in connection with farmers' boys and workshops. The farmer generally speaks as though his own business was not a trade. If one of his boys drives pegs into a shoe, he is said to be "learning a trade;" while his other sons, who work upon the farm, are spoken of and spoken to, merely as "staying at home." What injustice to the discipline of the farm! What injustice to the proficiency which his sons are making in the mechanical or operative skill necessary to perform the labor of the farm! The farmer, no less than the mechanic, serves an apprenticeship; and no less than the mechanic, he has a trade. Let a city boy, or any one who has never "learned the trade," undertake to chop, or hoe, or reap, or mow, or "either hold or drive" in plowing, or milk, or thresh, or bind grain, or pitch hay, or a great many other things that the farmer's son learns during his minority to do easily, and even gracefully, and it will be seen, by the awkward motions and slow progress of the city boy, that farming is indeed a trade, and further experience will show him, that like all others, it is not easily acquired in advanced life. The difficulty of performing farm work is not appreciated, because the requisite skill is gained gradually during the whole period of minority. The practical skill acquired in learning the trade of farming, says Prof. FISK, of the Agricultural College of Michigan, embraces an acquaintance with the mode of handling each farm implement. It is a knowledge of the *how*, including both the ideal conception of the manner of doing and the training of the muscles for the performance of the work in exact conformity with the mental conception. This skill in the discharge of farm duties includes the education of the mind, the education of the eye and the education of the muscles for their

several offices in the practical details of agriculture.

But a skilful use of implements is but a small part of the farmer's trade. The proper management of various soils and manures, the culture of crops, the raising of stock, each and all demand his thought, his labor, his skill, his odd hours and his rainy days.

Reverting now to our question about repairing agricultural implements, we leave it with the good judgment of each individual to determine—and March is a good month in which to debate the question—how many odd hours and rainy days himself and boys shall devote to the practice of the art and mystery of handicraft pertaining to the business of the carpenter, the wheelwright, the blacksmith, the shoemaker or the saddler.

For the New England Farmer.

PLANNING AND PREPARING WORK.

MR. EDITOR:—It is generally admitted, I believe, that order and system are essential to success in every kind of business. It is especially so in farming. It will not do for the farmer to plod heedlessly on, day after day, and week after week, trusting to fortunate and fortuitous circumstances, without having any previous plan or arrangement in his business. To be successful in his business, the farmer must plan and prepare his work beforehand, so as to be ready to take it up at the proper time, and to do it in a proper manner. There must be order and system in all his plans and arrangements, so as not to have one kind of business interfere with another. Every kind of work should be done at the right time, and in a proper manner.

There are some kinds of farm work, undoubtedly, that may be done about as well at one time as another, provided they be well done. There are other kinds of work, however, that require to be done at a particular time, or within the limits of a particular space of time. There are several kinds of work that cannot be done before nor after the limits of a particular space of time, without failing to be successful in their results. It will not do to plant and sow before the earth is in a condition to receive the seed into its bosom, nor to gather in the crops of the season before they have come to maturity. Nor will it do to plant and sow after the appropriate season has passed, nor to gather in the crops after they have been wasted by the storms of the season. There is a particular season or space of time in which all such work should be done.

A successful farmer plans and prepares his work beforehand for every season of the year. He knows that every season has business enough of its own without being encumbered with what belongs to a different season; that in the spring and summer, especially, a large amount of work is necessarily crowded into a very small space of time, which, to be done well, must be done then, or not at all. Having planned and prepared his work, and made his calculations accordingly, he takes up each particular kind of work at its appropriate time, performs it skilfully, and finishes it before engaging

in another or different kind of business. He does not allow himself to be interrupted in his work by the calls of other business, such as mending fences, repairing tools, running here and there, doing this and that. No; having planned and prepared his work beforehand, he proceeds with great regularity, and attends to everything in its order.

The winter is a season of comparative leisure, in which the farmer has a plenty of time to plan and prepare his work for the more active and engrossing employments of spring and summer. It is the time for study; for reading, reflection and discussion; for making calculations, maturing plans, and preparing work; and last, not least, for cultivating the social affections. By availing himself of favorable weather and circumstances, during this inclement season, he can do much work, too, which will advance his operations and facilitate his business during the coming season. The same is true with regard to the autumn. Late in the autumn, that is, after the ingathering of the fruits of the season, the farmer enjoys an amount of leisure which might be profitably employed in doing such work as may be done about as well at one time as another, such as breaking up greensward, ditching, hauling out muck, picking up stones, building walls, repairing fences, &c. If such work be done in the autumn, and well done, so much time is gained for the operations of spring and summer work. In the spring, in preparing the ground and sowing the seed, a great amount and variety of work is crowded into a very small space of time, all of which must be done within the limits of a very few days. It seems as though a half a dozen kinds of work required to be done at the same time, and would not wait, the one for the other. The same is true with regard to summer, or the haying season. The time for cutting and curing hay, so as to preserve its valuable properties, and to have it palatable and nutritious, is short, very short; and it should be done at the proper time, and in a proper manner. The way to accomplish this object, is to plan and prepare the work beforehand. "To make hay while the sun shines," requires the previous preparation of scythes, rakes, forks, carts, &c.

Warwick, Jan., 1862. JOHN GOLDSBURY.

For the New England Farmer.

AGRICULTURAL SCHOOLS.

We are informed by sacred history, that when man was created, he was placed in a garden, and commanded to prune, and water, and care for it, in such a way as would cause it to yield fruit for his sustenance; therefore, it would seem to us that tilling the soil is an employment which is the most natural to mankind, besides being pleasing to his Maker. I would not be understood by any, that I think all men should be farmers, or that man is in an error when he forsakes farming, for certainly we must have mechanics, and merchants, else even the farmer would not prosper in his employment; but this I must say, farming is neglected: it is done too much on the "one horse" principle.

With too many, the idea is prevalent, that if they can get in a little corn, a few potatoes, a small piece of rye, barely enough to "keep soul

and body together" from one end of the year to the other, why that is enough; all that they can expect to do. For every thing else, we have schools, and good schools as a general thing; millions of dollars are spent annually for the support of schools to educate our children in many a branch, for which, in after life, they never realize the value of a ten-cent piece, while an agricultural school is hardly to be found in the country. To be sure there are some, but poor specimens at the best, when compared with the other schools of our land. At the present time, when farming seems to be the safest, and almost the only business by which man can earn a livelihood, let us not neglect it; and while other business declines, let us strive to make farming more profitable and prosperous.

Let us have schools for the farmer's benefit especially; schools in which nothing but agriculture in its various branches shall be taught. Many, to be sure, are so prejudiced, that they would not send a child to them, preferring rather to make his boy learn his lessons by sad and often costly experience, rather than from books which contain the experience of wiser men. On the other hand, there are those who would rejoice at the idea of such a thing, and would avail themselves of every opportunity to instruct their children in that calling which is not only healthy and pleasant, but honorable for all classes of mankind.

The prince in all his costly array, is really not so independent as the man who has a good farm, free from debt, and especially if he has an interest in the business, and understands it, as he will do if he has enjoyed the privileges of an agricultural school in his boyhood. Then let us no longer neglect them, but have some of the millions which are annually spent in uselessness, to establish and support these schools which we so much need, and thereby promote the prosperity and welfare of the farmer.

E. P. L.

Ware, Jan., 1862.

THE TRAINING OF HOME CONVERSATION.—To subordinate home training to school training, or intermit the former in favor of the latter, is a most palpable and ruinous mistake. It is bad even in an intellectual point of view. To say nothing of other disadvantages, it deprives girls of the best opportunities they can ever have of learning that most feminine, most beautiful of all accomplishments—the noble art of conversation. For conversation is an art as well as a gift. It is learned best by familiar intercourse between young and old, in the leisure and unreserve of the evening social circle. But when young girls are banished from this circle by the pressure of school tasks, talking with their school-mates till they "come out" into society, and then monopolized entirely by young persons of their own age, they easily learn to mistake chatter for conversation, and "small talk" becomes, for life, their only medium of exchange. Hence, with all the intellectual training of the day, there never was a greater dearth of intellectual conversation.—*Ohio Farmer.*

He that puts a Bible into the hands of a child, gives him more than a kingdom, for it gives him a key to the kingdom of heaven.—*Dr. Buchanan.*

For the New England Farmer.

SOUTHERN ILLINOIS.

MR. EDITOR:—I wish to call the attention of those desirous of settling in the West, to the superior advantages of Southern Illinois, as regards location, facilities for market, soil, productions, climate, &c.

The location of Southern Illinois, immediately above the confluence of the Ohio and Mississippi rivers, and the 500 miles of navigable waters on the south, west and east boundaries, give to this part of the State great natural advantages; and these, with its railroads passing through from north to south, and from east to west, afford extraordinary facilities for transporting its surplus products to market. Other roads, now in process of construction, will further increase these facilities.

The farmer or trader wishing to reach the best market, is here, either by steamboat or railroad, within six days of New Orleans, thirty-six hours of St. Louis, and three days of Chicago, Louisville, or Cincinnati, by freight trains; by passenger or express, the time is much shorter.

The soil in this region, especially in the timbered lands, is unsurpassed in productiveness. It is light and easily cultivated, being almost entirely free from stones and other obstructions (where the stumps are out;) the subsoil is of great depth and richness, capable of receiving and retaining moisture for a long time, and as a consequence, the crops are not often injured by droughts. Winter wheat is a staple crop; with good culture the yield is twenty to forty bushels per acre. Oats, rye, barley, buckwheat, millet, red clover and timothy are excellent crops. Indian corn is grown abundantly, and with good culture, yields from forty to eighty bushels per acre. Cotton is grown in the southern counties, but for domestic use only. Sweet potatoes yield abundantly here. Apples do well, and are a certain crop in almost any situation; many of the most popular varieties grow much larger and finer here than in the Eastern States.

This is the true home of the peach, which for size and flavor is unsurpassed; the most elevated lands being the most desirable for peach orchards, on account of spring frosts. There has not been an entire failure of the peach crop for twenty years, on elevated lands; on medium and low grounds, only about three crops in five years can be expected. Pears, cherries, plums and quinces do well. Much of the land is well adapted to the grape, as the thousands of thrifty-growing, wild grape-vines will testify. In the fifteen southern counties of this State, there is but little prairie; the surface in some parts is hilly and broken, but generally agreeably undulating. Swamps are not found, except in the extreme south, on the low grounds near the Ohio and Mississippi rivers.

This portion of the State is covered with a moderate growth of red, burr, white, black and post oak; poplar, hickory, ash, gum, pecan, sugar maple, walnut, hackberry, cherry, &c., with an undergrowth of dog-wood, sassafras, pawpaw, red bud, &c., &c. Good water is generally found by digging from twenty to forty feet.

In the hilly country, good springs are numerous. Where good springs are not convenient, cisterns can be cheaply made, and furnish good, wholesome water.

The climate is temperate; there is neither the protracted cold of the North, nor the sultry heat of the South. The thermometer, in the shade, rarely indicates a higher degree of heat than 90°, or a lower than 10° above zero. We have had no weather as yet, this winter, colder than 10° above zero, and last winter the temperature was not lower than 10° above zero, except once or twice, and then but for a few hours. We have had two little flurries of snow this winter, which melted off almost as fast as it fell,—so you see we have no use for sleighs here. The ground is generally free from frost by the first of March, and in good plowing condition in the same month. Farmers are sometimes seen plowing in December or February.

The direct communication we have by railroad with Chicago, Milwaukee, Galena, Dubuque, Bloomington, and other northern towns, makes this a very desirable place for gardening, which bids fair to become an extensive business here, as also the growing of small fruits, such as strawberries, gooseberries, &c. We can have vegetables and fruits ready for market from four to six weeks earlier than the Chicagoans.

Plenty of good land can be had here at from \$5 to \$50 per acre, according to location and improvements.

Pomologically yours,

AN EGYPTIAN.

Union Co., Ill., January, 1862.

For the New England Farmer.

MOVABLE COMB HIVES.

A RELIABLE GUIDE FOR STRAIGHT COMBS WANTED.

Although these hives are a great acquisition to very many bee-keepers, they are yet deficient in one important particular. No one seems to have discovered a guide for producing straight combs that can be depended on in all cases. The cross-bar hive that has strips of lath sharpened on the lower edge, like a broad knife, and passing across the top, just the right distance apart, has been warranted to produce all straight combs. Yet some swarms are perverse enough to work their combs across these bars. The angular edge on the under side of the top bar, of nearly all the movable comb hives that I have seen, will, if sawed smooth, in most cases, be followed by the bees; but a great many swarms pay no regard to any of these rules, and make their combs in all possible directions across the hive, and render it of no more value as a movable comb hive, than a flour barrel. The edge of a narrow strip of tin, attached to the frame of Underhill's hive, that promised so much, has failed to produce the results anticipated.

The dispute between Mr. Brackett and Mr. Kidder, relative to what I said in the *Rural New-Yorker* about movable combs, proved nothing as to which was the better guide of the two, Langstroth or Kidder. What I said was not given quite correctly. It was my neighbors, who had put bees into these hives, when "two-thirds of the swarms worked crooked." I think I stated at that time, that I could manage to get nearly all straight combs. Subsequent experience has proved that I was correct. I have not failed with one in fifty. Any one understanding his business, and disposed to take the trouble, would succeed equally well. But a great many that keep bees are not sufficient-

ly posted in their habits; others have not the necessary time to devote to them the necessary care; some are too indolent to take the pains needed, and more will not have the means at hand—empty combs, or dividing boards—to secure them. Hence the importance of some method that will induce the bees to go right every time, without our supervision. To us who now manage to get straight combs, it would be an acquisition; we cannot as it is, do it without trouble; it would often be a great convenience to put bees into a hive wholly empty.

Now let Mr. Kidder give us a reliable guide for straight combs; one that everybody can prove true; not like the humbug of a swarm being made to store 300 pounds in one season. Or let Mr. Langstroth, Harbison, Underhill, Flanders, any one of the host of the patentees of movable comb hives, exercise their ingenuity on this point, and give us the desired improvement. Although a patent is repugnant to my feelings in a bee-yard, I would tolerate one more in this case, if we cannot have the improvement without. Variations of the movable comb hive are unnecessary to multiply further. Let us have something in the line needed.

M. QUINBY.

St. Johnsville, N. Y., 1862.

For the *New England Farmer*.

MANUAL OF AGRICULTURE.

Progress in the Art—State and County Societies—the Agricultural Press—Farmers' Clubs—Agricultural Libraries—Manual of Agriculture.

MY DEAR SIR:—It is always a pleasure to chronicle the progress of improvement in whatever form it may present itself, and more especially when it leads to a more thorough and more general development of the agriculture of the country. Since the commencement of the present century, there have been many landmarks established to show that mind, as well as bodily toil, were essential to the full, successful cultivation of the earth, and the collateral arts. Earliest among these was the formation of Agricultural Societies. It was mind; deliberate, active mind, was the originator of these. There are many now living who treasure in remembrance the earliest buddings of the earliest efforts in behalf of these institutions. Such can well remember how great a curiosity they awakened in the minds of some, as also the bitter opposition they met with in the minds of others, and among farmers, too. But early discouragements, in their formation, yielded like the ice before the cheering sunbeams; so that now we have a United States Agricultural Society, State Societies in a majority of the States in the Union, County and Town Societies almost without number. Had the originator of the first Society had an assurance of the number of such Societies half a century would bring forth, and the amount of usefulness that would follow in their train, what a noble impulse it would have given to his labors!

Next in the train came the Agricultural Press, the engine to disseminate the knowledge that was accumulating through the agency of associated effort at improved husbandry. Those who recollect the birthday of the old *New England Farmer*, can remember, too, the distrust with which the majority of farmers looked upon it. They did not want newspaper knowledge, for they knew better

than the papers did. This dream, too, has passed away. The *New England Farmer* lives on, a life of usefulness and honor, and has begot many sons and daughters; so that now the agricultural press has become a powerful press, not only in numbers, but in influence; and instead of being looked upon with jealousy, as the innovator of strange and fallacious doctrines, it is deemed a household necessity in every farmer's dwelling, especially if that farmer loves and respects his calling. Their number is now legion—their influence is inestimable.

The establishment of "Farmers' Clubs" in towns and neighborhoods, where mind meets to hold intercourse with congenial minds, formed another important era in agricultural progress. The advantages that may result from these institutions are too many for enumeration, and cannot be too highly appreciated.

In connection with Farmers' Clubs, the establishment of Agricultural Libraries marks a proud era in agricultural progress. It does not require the memory of great age to go back to the period when such libraries were a thing unthought of, and had their existence occupied a place in the farmer's mind, it would have been a difficult task to have procured suitable books to place on their shelves. Now, such books are becoming abundant, as libraries are springing up everywhere.*

But all these things have occurred for the benefit of men—those engaged, or just about being engaged, in the practical duties of active life. They, ever hopeful and young, may, to be sure, have been to some extent benefited by them. But their wants were not met. Their case, of a certainty, has been long considered, but delay succeeded delay in acting upon its claims. At last a star, bright and beautiful, arises upon them, and it shines for all. The rich and the poor can meet together, and study and admire its beautiful light.

I consider the *Manual of Agriculture*, prepared by Messrs. EMERSON and FLINT, one of the best works on Agriculture extant, and for the purpose for which it is designed, as the very best. And I hail its introduction into our common schools as the introduction of the golden age of agricultural progress. It is a matter of proud congratulation that its introduction has been so successful. May it become universal. It has been a favorite idea with me, for a long time, that the study of Agriculture should have a place in our common schools, and I rejoice that this idea is so far approaching a realization. But one thing more is needful. We must have teachers adapted to the work, in order to make it successful. Our Legislature, in the name of the people, should legalize the study, and our Normal Schools must educate their teachers to carry out the work.

What a beautiful era it will be, when the arts of rural life are taught in all our schools by thorough and efficient teachers; when every school-house will have its grounds cultivated by the hands of enthusiastic pupils, and when the library and the cabinet shall be classed among the essentials of school-house furniture!

W. BACON.

Richmond, Jan., 1862.

* In a communication from J. Reynolds, Esq., of Concord, dated early in October last, he informs me that previous to that time he had established nearly two hundred Agricultural Libraries in Massachusetts. I hope and believe the number has been liberally increased since that time. His Catalogue embraces a valuable list of books.

For the New England Farmer.

THE WINTER FIRESIDE.

Within a few years the farmer's fireside has undergone a marked change, as we all know. The old-fashioned open fire of logs, or blazing fagots, has come to be too expensive a luxury, except in backwoods settlements, where wood is the cheapest commodity.

But the question is, whether it was the most profitable way of passing winter evenings, for the household to cluster, as they used to, about that big, generous fire; the younger members whiling away the hours with reveries, and jokes, and story-telling, and the old folks gradually subsiding into the embrace of "tired Nature's sweet restorer." To be sure, those old fireside scenes are treasured among our pleasantest memories—and many a man misses now the glowing hearth and dancing flames that used to make his face shine so, and his heart leap when a boy. But on the other hand, more than one day-dreamer contracted the habit of dreaming with his eyes open, and building air-castles and the like, at that very fireside, where the singing of the tea-kettle sounded like a syren's song, and the embers and flames assumed as many grotesque shapes as his musings in the fire. No doubt, bright ideas were kindled from those live coals, and occasionally a stupendous scheme rose like the Phoenix, from ashes. Yet, after all, was not that old-fashioned fireplace most favorable to dream-life, in more senses than one, and was the home circle any more one bright "golden chain," binding heart to heart, than now?

There was, I admit, a large circulation of fresh air through the sitting apartment then—especially by the doors and windows, and corners of the room remote from the cosy chimney-corner—and plenty of exercise, too, in preparing and bringing in wood to supply that generous fire. But when a family gets together for a winter's evening, they can do better than gather like a flock of swallows about a chimney, or as a company of fire-worshippers, that we read of. If the room be comfortably warm—no matter by what means the warmth is generated, provided it be healthful, economical and safe—whether from an open or close fire, a furnace, or pipe from an adjoining apartment.

In the days of our forefathers, they depended on the open fire-place, we know, to help illuminate, as well as heat the room; and how we loved to, when children, watch our own shadows, looming up so queer and tall, here and there, as thrown, by the big, blazing fire, upon the wall opposite. But in these days of "burning fluid" and kerosene oil, every farmer's sitting-room is brighter than ever fire-light made it. And now that the temptation of the old, open fire-place is gone, we must look around and find some good substitute. Why not gather around the table, all so cheerful with the rays of that bright lamp in the centre; and while mother and daughters are sewing, let the father and sons be reading, or drafting plans of operations for the next season? At any rate, let some head-work be going on as busily as those nimble fingers on the other side are plying the needle-work. Perhaps there is a piano in the house—for many farmers are introducing this article among their household furniture—or, at least, the melodeon, which, being much cheaper,

is likely to be more common. And perhaps the instrument is not left alone in the cold, unfrequented "best room;" but allowed to take its place in the living-room through the winter, and help on domestic harmony with its "concord of sweet sounds." I, personally, have such a passion for music that I dare not enlarge upon the subject here, for fear I should spin out this communication *ad infinitum*. Only let me throw out this closing hint, for relieving the monotony of a winter evening; let every farmer that has the material, encourage and cultivate music at home. No matter if it lulls one after another to sleep; it will keep as many more wide-awake and out of mischief.

W. E. B.

Longmeadow, Jan., 1862.

EXTRACTS AND REPLIES.

USE OF RAW HIDE.

In the last number of the *Farmer* you say that skins (meaning hides) may be tanned by spreading "powdered alum or soft soap on the flesh side," &c. Now let me guess that soft soap will take the hair from the hide or skin, if applied on the flesh side. Alum is of a different nature, and will act as an astringent, or tan, and with common salt will preserve the raw hide, but soap without the alum or salt, will surely, if applied in quantities to preserve the hide from taint or decomposition, take the hair off. If the object is to take off the hair before using the alum and salt, it would answer the same purpose as lime—but soft soap, without any other ingredient, will start the hair from the hide or skin.

A TANNER.

Rockingham, Vt., Jan. 13, 1862.

REMARKS.—When a boy, at home on the farm, we used to find amusement and profit among the grey squirrels and partridges, "when they were ripe;" their flesh made an excellent breakfast, and the skins of the former were wrought into ear-pieces for caps, or into caps themselves. Our practice was, to take off the skins carefully and spread them, flesh side down, on the top of a cask of soft soap, being careful that the soap should not touch the upper part of the skin. In about ten or twelve days they were taken out, the soap washed off and the skins drawn over a board or back of an old chair until they were as "soft as silk." We have no recollection of ever spoiling one by this practice. We have no doubt that considerable care must be observed in the process. The soap was made in the family, and might not have been as strong as is sometimes made. But of this we know nothing.

We sincerely thank our correspondent for his kind words of approbation of the *Farmer*, contained in a private note.

COWS EATING LITTER FROM MANURE HEAP.

I wish to inquire of you, or of any who can tell me, through the *Farmer*, the cause of my cows eating the straw and litter from the heap of horse manure in preference to good clean fodder? Thinking it might be for the want of a sufficient

supply of salt, I placed it by them, but still they root over the manure like swine, and eat every particle of litter they can find.

Is it an injury to them, and if so, what will stop the filthy habit? Please give me your opinion, and oblige
A SUBSCRIBER.

Sturbridge, Jan., 1862.

WATER CISTERNS.

You occasionally speak of water cisterns in the *Farmer*. They ought to receive more attention. Our mode of constructing them is to make the top round and the bottom run down to a point like the small end of a hen's egg. The process is as follows:—Dig some seven feet below the frost for the bottom. The part of the country, and the location of the cistern must guide as to frost. Dig through the frost and make a circle 12 inches all around the cistern hole, and then start the hole down some two feet and put on the top; use flagging stone by all means, if they can be had from seven to ten cents per foot, surface measure. Leave the hole open, and then finish digging the cistern. When dug in the proper shape, take two barrels of water cement, and mix one part of cement to three parts of sand, which must be mixed as it is spread, or it will get hard. The mason must use some judgment, and temper the cement according to its strength. Give it two coats of cement, and for a finishing touch, mix some thin to use as a wash; give the whole one or two coats.

We build them here on leachy and gravelly soil, and the water in them, from November to the last of May, is as good as any well water. They should be cleansed out once a year in the fall, and always built so that frost will not reach them.

My estimate for building one of these cisterns is as follows:

For digging.....	\$2.00
Stone covering.....	3.10
Mason work.....	3.00
Two bbls. cement.....	4.00

\$17.10

Dalton, Jan., 1862.

T. S. WILSON.

FINE PIGS.

I noticed at the Essex Cattle Fair held at South Danvers, in 1860, a Mackay breeding sow and nine pigs, five weeks old, of a litter of sixteen of the somewhat noted stock of Byron Goodell, of that town. Upon inquiry, I found they were kept for breeders, except four, which were taken at that age by different individuals of that town, and kept until their average age was fourteen months and three weeks, then slaughtered, and weighed in the aggregate, including fat, twenty one hundred and four pounds! Some of them not weighing over one hundred and fifty pounds in the spring, being kept light through the winter. These were all fit for the market when not weighing over two hundred pounds, dressed. This is a general characteristic of the breed. One of the four, fattened by Mr. Samuel Chandler, weighed six hundred and nineteen, beside the fat. The butcher said it was the "thinnest rind" hog he had slaughtered for the season. These were fattened on grain, meal and shorts. The same sow had another litter last April, of eighteen, which were kept for breeders, and will now weigh from three hundred and fifty to four hundred pounds each!

A NUMBER ONE RAT TRAP.

As good a rat trap as I have ever used may be made by taking a piece of 3 by 4 scantling, say two feet long and about two or three inches from each end, and at equal distance from the sides bore two holes, and insert in an exactly perpendicular position two pieces of broom handle or other round stick, and across the centre cut a place deep enough to admit a bit of shingle for a pan. Nail a piece of board a few inches wide on each side, a hole being cut in one of them for the shank of the pan. Next take a piece of scantling of the same length as the other, but a little less in width, so as to drop readily between the side-boards on the first, and bore two holes through it large enough and in a position to play freely on the uprights; fasten two cords to this and attach them to a roll made to rest on the uprights. To an arm projecting a foot from the centre of the roll attach another cord, and tie the other end to the centre of a bit of wood fitted to notches in the shank of the pan and the side-board in the form of a "figure four," another notch in the shank catching on the inner side of the board. Now turn the roll a few times so as to raise the upper scantling a few inches and apply the catch, and you have a trap which can remain "set" six months, if you please, without weakening any springs, and being open at both ends, is not likely to frighten the game.

WM. F. BASSETT.

Ashfield, Jan., 1862.

SEEDING GRASS LAND IN THE SPRING.

In the *Farmer* of Jan. 11, I noticed an inquiry whether herdsgrass and clover are profitable if sowed early in the spring. In the spring of 1860, I sowed four acres as soon as the frost was out of the ground, on land fitted for mowing the fall before, sowed eight quarts of herdsgrass and five pounds clover seed to the acre, and cut the same year two tons of clean hay, per acre. In 1861, I cut rather more than in 1860. In April, 1861, seeded three and one-half acres, and put on one-half bushel herdsgrass seed, per acre; the result was not as favorable for spring seeding, owing, I think, to its being so wet through the following month of May. The result was twenty-five hundred of hay to the acre. I fitted four acres the past fall for seeding next spring, and I shall practice this way of seeding as long as the result proves as favorable as it has the past two years.

Waterbury, Vt., Jan., 1862.

S. F.

FOUL IN THE FOOT.

Can you, or any of your subscribers, inform me which is the best way to cure "foul in the foot" in cattle.

I. F.

Pittsfield, Jan., 1862.

REMARKS.—See that the feet are kept clean, and try them by pressure with the thumb and finger. If some spots are found very tender, open them so as to let the corrupted matter pass out. Then wash the feet once or twice a day in a solution of blue vitriol. Keep everything clean about the animals, and see that they stand upon a smooth floor—that is, a floor that is not worn into ridges, or that has holes in it.

QUESTIONS AS TO SHEEP.

1. What aged wethers are best to buy in spring to turn out through the summer for mutton?
 2. What breed is best?
 3. How much will they gain in the season with good feed?
 4. How much will the May and November prices vary, per pound, live weight?
 5. How many can be kept well on the feed of one cow, or how many to the cow?
- Hardwick, Jan., 1862.*

INQUIRER.

REMARKS.—We hope that friend ELLIOTT, of Keene, GEORGE CAMPBELL, of Westminster, or some other person who understands this matter, will answer these questions.

AN UNMANNERLY PIG.

I have three Chester county sows with pig, which are kept together; one of them is continually rooting the others with her nose, to their great annoyance and injury. I have given her salt, bone meal, and various other foods, but fail to check it. Can any of your readers inform me of the cause and the remedy?

J. S. IVES.

Salem, 1862.

REMARKS.—Place her in a pen by herself, friend Ives, for a few days, and take away a portion of her food, and if she is not more respectful in her "conductions," we shall be mistaken.

THE ARMY TELEGRAPH.

The army telegraph now consists of over one thousand miles of wire stretched through the different camps, from the headquarters of General Hooker on the left, running toward the right wing till it reaches Hancock, Md. One hundred and ten operators are now in the employ of the government. Mr. Eckert, the assistant superintendent in charge of this department, has run a separate line to the headquarters of each general commanding a division.

For instance, General McClellan can sit at the table in his private house, and talk to the different Generals, all at one and the same time, and independent of one another. When any division moves, the line can also be extended, as each division has a corps of builders, and a supply of wires poles and insulators always ready.

Large wagons have been provided for the operators and their batteries to travel in, with sleeping apartments, tents, equipage and everything necessary, thus making the telegraphic department the most efficient and thorough branch in the whole army; and in connection with the balloon corps of Professor Lowe, will, should the army move, prove incalculable in detecting the operations of the enemy, and the prompt transmission of their movements to headquarters, and the conveyance of orders to different divisions and brigades.

So effectual are the means that have been taken to prevent accident and delay, that it will be impossible for more than one out of a dozen lines to fail at once. Strong guards will be kept all along the wires wherever they cross over exposed country, as the army moves, to prevent obstruction in any form, and to prevent an opportunity of stealing information from the wires. Never before, in

the history of the world, has science been enabled to reduce to such a mathematical certainty and reliability, the use of the telegraph and ballooning as it has been brought to under the management of Professor Lowe, Mr. A. P. Stager, and Mr. Eckert.—*Philadelphia Inquirer*.

INSECTS INJURIOUS TO VEGETATION.

Through the kind attention of the editor, CHARLES L. FLINT, Esq., Secretary of the State Board of Agriculture, we have before us a copy of the new edition of Harris' Treatise on some of the Insects of Massachusetts which are Injurious to Vegetation. This was ordered to be printed by a resolution of the Legislature of 1859, and with suitable additions and illustrations. The care of the execution of this work was entrusted to Mr. Flint, and well and faithfully has he discharged the task. The work does as much credit to the arts, as to the science to which it is devoted.

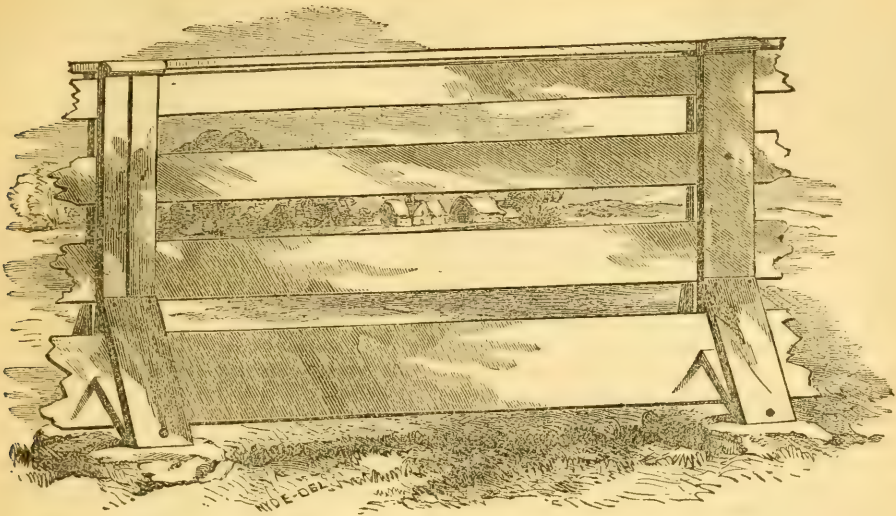
In acknowledging the aid which he has received from others, the editor says:

"The drawings for the steel plates were made by Mr. ANTOINE SONREL; those for the wood cuts by the Messrs. SONREL and J. BURCKHARDT. The engraving and coloring of the steel plates is the work of Mr. JOHN H. RICHARD; the engraving on wood, that of Mr. HENRY MARSH. The printing has been done by Messrs. WELCH, BIGELOW & Co., of the University Press, Cambridge."

It is as much pleasure to us to record the names of persons who have exhibited such rare skill in their various professions, as it is to accord praise to the author of a book of undoubted merit. With our people, mechanical skill and scientific research keep pretty even pace with the progress of literary acquirements. It is this, in considerable degree, that keeps society evenly balanced, and makes a people strong.

The book is a credit to old Massachusetts, and will stand as one of numerous evidences of her liberality and enlightened discernment. The Legislature that ordered it, directed that a copy of the work should be sent to each town in the State,—so that provision is made for all who desire it to have access to the work.

If we are pleased with one part more than another, of this book, it is with some of the *wood cuts*. They surpass anything of the kind we have before seen, in beauty and elegance of execution. It seems as though one could touch the wing of the *Butterfly* on page 293, and rob it of some of its down; and so of cuts on pages 223, 410, and indeed many others. We have long and often referred to the former edition of the work, in our labors as editor and farmer, and shall continue to do so with increased pleasure, now that so many of the insects spoken of are made plain to the eye as we study their habits.



For the New England Farmer.

**SMITH'S IMPROVED FARM FENCES,
PATENTED OCT. 11, 1859.**

NUMBER ONE.

Any field stones, of suitable size, that can be easily drilled, are used for the foundation of these fences. Granite cobble stones, so common in New England, are among the best.

The posts, which are two inches thick, and from four to six inches wide, are fastened to the stones, and the fence is kept in position by a bolt which holds the foot of the post, and by braces, about twenty inches long, one on each side, nailed at the top to the post, and at the bottom held firmly to the stone, by loops of strong wire, boiled in linseed oil to prevent them from rusting. The posts are *grooved* on the sides to which the boards are nailed, with a plane which cuts three or four grooves at once, to prevent the accumulation of moisture and consequent decay.

The braces are one inch thick and four inches wide, and sound hemlock is good enough for both posts and braces.

The advantages claimed for this fence are :

1. *Simplicity.* Almost any farmer, with a little instruction and experience, can build it.

2. It is *straight*. There is no zigzag about it. New York, alone, loses 300,000 acres of land by crooked fences.

3. It is *cheap*. Having stones convenient for the foundation, it need to cost but little more than the common post and board fence; and the arrangements of the posts and braces is adapted to nearly all the different kinds of yard and garden fences in use.

4. It is very *firm*. When well made, few fences are as much so, and no extra posts are necessary for gates.

5. It covers but little land; not more than one-twelfth as much as a wall three feet in width, and the Virginia fence puts six times as much beyond the reach of the plow.

6. It can be easily built over ledges, the solid rock of which affords the best foundation.

7. It will resist ordinary currents of water.

8. It will stand on *heaving soils*. For these valuable lands, the importance of this fence can hardly be estimated. Where wall fences are tumbled about, and posts are thrown out by the frost, it will stand, and stand straight and stand firm.

9. It is *very durable*. No part but the stone foundation touches the ground, and with the grooved posts or cleats, no part of it is more exposed to decay than the boards ordinarily are upon a barn. thus effecting an immense saving in the cost of rebuilding and repairs. The loss to our farmers from fence posts decaying in the ground, and being thrown out by the frost, is almost incalculable.

REMARKS.—We are so much pleased with a sample of this fence, put upon our land by Mr. SMITH, last fall, that we are preparing materials this winter to extend it, in preference to any other fence we have seen. It seems to us to be preferable to any other wooden permanent fence in almost every particular, and we cannot see why one well made and set, and kept constantly covered with whitewash, should not last a hundred years.

In a week or two we shall give another pattern of fence, quite like this, but cheaply arranged so as to be laid down in the winter when set on lands that are subject to being flowed. Both samples may be seen at Concord, Mass.

HORSE POWER.—The power of a horse is understood to be that which will elevate a weight of 33,000 pounds the height of one foot in a minute of time, equal to about 90 pounds at the rate of four miles an hour.

For the New England Farmer.

"DOES FARMING PAY?"

This question, which seems to have bothered many of your correspondents, and to have raised your friend Pinkham to a sort of newspaper immortality, got itself incidentally into our State Legislature the other day; and the Solons there appeared to know as little how to dispose of it, as though they were agricultural editors. The "crooked stick" was introduced in this wise: The State Alms-house at Tewksbury had applied for, and the Committee on Finance had reported, an appropriation of some thirteen thousand dollars, to meet the deficiencies in the account current of that institution for the year 1861. Mr. PARSONS, of Brookline, raised the question, whether the institution had been economically managed—more particularly whether the *farming* department thereof did not cost more than it came to? This called up Mr. FOSTER, of Andover, (one of the Trustees of the Alms-house,) who, in a very straight-forward speech, explained that the expenses of the institution beyond the estimates were occasioned solely by the largely increased number of paupers, and that the actual cost to the State for each pauper sent to Tewksbury, (reckoning all the expenses of the institution,) was only a fraction over and above ninety-eight cents per week. This, I think, establishes the fact that the Tewksbury concern is a pretty cheap boarding-house; and whatever difference of opinion may exist as to the general utility of State alms-houses, a want of economy cannot in fairness be charged to the case in question.

In the course of his remarks, Mr. PARSONS held that it was cheaper to purchase milk at four cents per quart, than to produce it by keeping cows at the Alms-house. I understood him to base this remark on the results of his own farming experience. Mr. FOSTER replied, that the milk produced at the Alms-house cost the State but a fraction over three cents per quart; and when it is considered that this milk was the product of cows that *shed rain*, and that these cows must have produced at the same time a large quantity of manure, the question of cheapness in the two cases is pretty well disposed of. At any rate, from the attention I have been able to give the subject, I am satisfied that it is better for any person having the means of keeping cows, to produce his own milk, rather than purchase it at even two cents per quart.

Mr. PARSONS also stated that it cost more to purchase food to fatten swine, than to purchase pork. This may be true, under certain circumstances, abstractly considered; but practically, the question stands in the same category with other farming interests. When it is considered how much about a farm, (and especially about a large alms-house,) otherwise wasted, or of but little account, may be applied to the keeping of swine, and how much manure these animals may assist in manufacturing, I undertake to say that no agriculturist can afford to dispense with the raising of his own pork.

That farming does "pay," I think is fully established by the fact that farmers seldom fail in business, or depreciate in wealth. But I go further, and maintain that *every branch* of farming "pays" in the long run, if managed with good judgment

and sound economy. Crops may fail, cattle may die, pork may be low in the market, all sorts of casualties may from time to time disappoint the hopes of the tiller of the soil. These form a part of the "accidents" which, as Brownson says, man is born to triumph over. Believing that any attempt to detract from the profitableness of farming, whether made in the Legislature or out of it, has a mischievous tendency; and further, believing that giving agricultural employment to the inmates of our alms-houses, whether considered from an economical or sanitary point of view, is one of the wisest and most philanthropic features now attached to those institutions, I hereby enter my protest against that flippant dogmatism which seeks to dispose of grave questions by the results of single cases of bad management, or by the lessons of inexperience. The great interest which lies at the foundation of all others, ought not thus to be made a foot-ball for amateurs in practical science, or egotists in practical economy.

A LOOKER ON AT THE STATE HOUSE.

REMARKS.—If reported correctly, Mr. Parsons' views are unsound. From a life-long experience, as well as from facts and figures, we know that he cannot sustain the position he has assumed.

For the New England Farmer.

WHEAT BRAN AS A FERTILIZER.

MR. EDITOR:—I saw a communication from "J. S. S." in the monthly *Farmer* for June, 1860, saying he was using wheat bran as a fertilizer for corn, and his method of applying it, and a request that those who tried it, would note the result and report—I suppose he meant—to the *N. E. Farmer*. I took it for granted that he would do what he requested others to, and have been looking with some degree of interest for his report, but not having seen any from him, I have concluded his success was not worth reporting. I was pleased to see a statement from "T. G. H.," in a late *Farmer*, of his experience with the bran for corn; that he found it to be nearly equal to superphosphate, and less expensive. That being the fact, it stands all farmers in hand to make a liberal use of it. But his experience does not correspond with mine. I was induced, through the recommendation of a friend, to make use of the bran for potatoes. I applied it, a single handful to a hill, and covered it with soil before applying, as directed. The truth was, I had but very little faith in it, that it would be any better than the same quantity of sawdust, and that sawdust was of little or no value; the result proved it to be so. I thought if like would produce like, it must be good for wheat. Accordingly I applied it broadcast at the rate of 300 pounds per acre, and harrowed in with my wheat; the result about the same as with my potatoes. I have concluded that the opinion of my better half was correct, that I had better give the bran to the cows, and let them compost it before using it for manure.

J. P.

South Hampton, N. H., Jan. 24, 1862.

REMARKS.—Send the article you speak of in your private note.

LEGISLATIVE AGRICULTURAL SOCIETY.

[REPORTED FOR THE FARMER BY D. W. LOTHROP.]

The third meeting of the series was held at the *Representatives' Hall*, on Monday evening last, and the subject under consideration was—*Crops, and the Economy and Cost of Cultivation*. Dr. G. B. LORING, of Salem, was invited to preside.

He said the subject opened a wide field for discussion, and involved the whole business of agriculture. Everything coming from the land, commerce, manufactures, and all vocations, depend upon its successful culture. In respect to the profit and economy of the various crops, there seemed to be no law for the different localities of the State. The farmers of Berkshire think the small grains the most profitable, and those of Essex would say the root crops were the most economical. Then, again, others advocate the corn, hay and fruit crops. In fact, it is impossible to tell what is the most profitable. A contest in this State has been waged between grass and root crops, but has not been decided. What does it cost to raise an acre of corn? One says \$100, another \$30, &c. But the cost of a crop is not always an index of the benefit of such crop, for the soil and mode of cultivation affect the former, and home consumption or markets the latter. Corn at 25 bushels to the acre was of doubtful profit, but at 100 bushels to the acre, at 35 cents per bushel, it would pay. Generally speaking, Dr. L. thought there was no unprofitable crop in New England, but very much depended upon the *skill of the cultivator*. The corn crop can always be made profitable, and skill applied to the raising of all farm products will meet its reward. The English think turnips the most profitable, as they are fed down on the land in the autumn and winter by sheep, whose droppings easily enrich the soil. In this connection Dr. L. spoke of English fallows, but there is no necessity of them here. Corn, potatoes and grass are staple crops, and in their cultivation there is no loss. But shall we introduce new ones? He had great faith in root crops—not that they, like patent pills, were a remedy for everything—but they greatly improve the land. He instanced carrots, of which he could raise 35 tons to the acre, and of Swedes 18 to 22. These he compared with the products of corn and hay, and concluded that as they were easy of culture, and useful as an auxiliary, farmers should not neglect them. In conclusion, he said he had touched upon many topics of discussion, and hoped that some of the following speakers might disagree with him.

Mr. STEDMAN, of Chicopee, inquired if root crops were profitable to the chairman in his own case.

Dr. LORING said he did not intend to say that they were so much so as with some others.

Mr. STEDMAN then spoke of the diversity of experience in regard to carrots. From 15 to 18 tons per acre could be raised, and at from 5 to 8 cents per bushel. Generally they were more profitable to sell than to feed. Mangold wurtzels could be raised at the rate of 30 tons to the acre. He thought root crops were increasing, and it was well, as they tend to cleanse the soil. Corn is a staple, and for a single crop it is the best.

Dr. LORING said the yield of carrots differs very much from different modes of culture. He thought his statements were no exaggeration.

Mr. HOWARD, of the *Boston Cultivator*, being called upon, said he had not thought much upon the subject, but where much stock is kept, he believed it good economy to use root crops as an auxiliary in feeding. Turnips do not flourish as well here as in England, neither can we feed them with that advantage. The English feed them off by turning in sheep during the winter. But our winters are too severe for this procedure. He alluded, however, to a gentleman in Saratoga county, N. Y., who fed his sheep in this manner with satisfaction, but the speaker had his doubts about it. The relative value of different crops was a desideratum, and we ought to have a fund to establish certain facts in the feeding of crops. Milk from carrots is very good, and the best for butter.

Mr. STEDMAN inquired at what distance carrots should be grown.

Dr. LORING replied ten or eleven inches apart. He commended the orange carrot, with a heavy blunt root. The wheel hoe is used in Essex county for tilling this crop, as well as for onions.

Mr. STONE, of Hull, inquired what root would produce the most milk.

Mr. STEDMAN replied the mangold wurtzel.

Dr. LORING. Whatever will produce food will produce milk, though corn was regarded as a fattening principle. Mangolds give the best milk, but the Swedes are better for fattening. Daniel Webster used salt hay and turnips for fattening cattle in the winter, with an addition of meal. Good English hay and corn meal are useful for milk.

Mr. McLAUGHLIN, of Duxbury, was much pleased with roots. Carrots were good for the horse, and they produced richer milk from the cow than turnips. He feeds all his cattle daily from roots, and he finds their growth improves his land.

Dr. LORING said he had computed the value of the various grain crops, and referred to a lot of land of 15 acres which he had prepared, concluding that if planted to corn rather than barley, the difference in favor of the former would be \$250.

Mr. DAVIS, of Plymouth, said the solution of some of these questions depended upon the amount of land available, and remarked that the

would have been of a sufficient quantity of stable manure to produce a like result.

The superphosphate of lime is therefore a valuable fertilizer in the reclamation and renovation of old pasture or meadow lands, and especially so where lands like the above are located a mile or more from the homestead.

Superphosphate of lime is a valuable article in promoting the growth and increasing the fibrous roots of young trees and grape vines, and when applied in liberal quantities to the roots of bearing trees, has a beneficial influence on the size and beauty of the fruit. It is equally useful as a fertilizer for cereals, grasses and vegetables, and from experiments made heretofore, I have hopes that it may prove a preventive of the blast upon young seedling pear stocks, and to the mildew on peas and other plants subject to these diseases.

As a quick, and also as a durable fertilizer, I have seen many proofs in past years. I have ever considered it as one of the most economical manures in use.

Yours respectfully,

MARSHALL P. WILDER.

For the New England Farmer.

NOTES FROM THE MONOMACK.

—, January 22, 1862.

FRIEND BROWN:—I have not forgotten your kind request, made long ago, that I should occasionally "note" something for the especial benefit of the readers of my favorite *Farmer*, but other matters have, until recently, so completely monopolized my time and thoughts, that the thing was hardly possible. Now, however, I can occasionally find a breathing-place, and, unless you make haste to repent of your folly in extending the above-mentioned invitation, and summarily "cancel the bond," you are likely to hear from me quite often.

With this, I send along a few specimen bricks, and if your readers don't cry "quits," you may expect "a few more of the same sort" from

Truly yours,

SAGGAHEW.

AN HOUR IN A MODEL HOT-HOUSE.—One year ago, (Feb., 1861,) the writer was one of a party of about forty members of the "Great and General Court" of Massachusetts, who paid a flying visit to that ancient city, and celebrated watering-place—Newport, R. I. The ostensible object of the expedition was to make a sort of popular legislative survey of the route of a proposed railroad extension; while it was expected, incidentally, of course, to have a right down good time. The first object was fully accomplished, as may be seen from an examination of the legislative files; and the latter was—"ditto," as may be proved by the cross examination of each, either, any, or all, of the aforesaid forty respectable gentlemen.

While the rest of the party paid a shivering visit to Fort Adams, the writer, under the guide of a mutual friend, paid his respects to the superintendent of the estate of Beach Lawrence, Esq., Mr. Alfred Chamberlain, where he was most courteously received, and passed an exceedingly pleasant hour. Of the many objects of interest which came under his observation at the time, I propose now to speak only of his visit to the extensive hot-houses on the estate.

Mr. Chamberlain, the superintendent, is a native of England, an educated gardener, and an enthusiastic lover of all that is in any way connected with his profession. Among his many qualifica-

tions for the responsible post he now occupies, may be mentioned seven years' experience in the immediate employ of William Rivers, the celebrated English gardener and horticulturist. The latter is well known as the originator of a system of dwarf-pot-culture, for fruit trees and vines. That Mr. Chamberlain was no dull scholar of this distinguished master in the art, I had abundant opportunity for verifying upon the above occasion.

Though it was in the depth of winter, I found grapes, tomatoes, strawberries, pineapples, cucumbers, lettuce, potatoes, &c., &c., in all the various stages of growth, up to perfect maturity. To such a state of perfection has this artificial system of culture been brought, that these, and many other kinds of fruit and vegetables, fresh from the vines, are ready for the table every day in the year! Among the first of these to attract my attention were the

TOMATOES.—These were planted along the back side of the elevated borders, and were carefully trained to neat wire trellises, each plant occupying perhaps four feet wide, and four to five feet in height. Mr. C. recommends that they should always be trained to an upright trellis, and pinched back freely, as they look neater, occupy less room laterally, will produce a greater quantity of fruit, and ripen it a fortnight earlier.

Having tried the trellis plan of training, in garden culture, I have concluded that it is too troublesome for ordinary out-door cultivation, in all cases where *time* is any object. It is true that the vines look neater, and, perhaps, yield more fruit, but the value of the time consumed in tying up the vines will usually far exceed that of the extra crop. I prefer to spread a little coarse litter, leaves, or—better still—brush, under the vines, before they begin to lodge, and then let them run as they please. I have also tried the plan of clipping, or pinching back the shoots, but, for the same reasons, have discontinued the practice. I have recently learned that our friend, Mr. L—, whose business is solely market gardening, and who raises at least five hundred bushels of tomatoes annually, after trying various plans, has concluded that the most economical method is to let the vines have their own way.

STRAWBERRIES.—Of these there were several hundred pots, arranged principally on a shelf near the ridgepole, where they were flourishing with the greatest vigor. A row of them placed over the pipes in front, were in fruit, and would have convinced any one that this delicious fruit deserves more consideration in hot-house culture. I never saw vines more heavily laden. They were principally, *Wilson's Albany Seedling*, of which Mr. C. spoke in the highest terms, for their bearing qualities.

CUCUMBERS AND SQUASHES IN POTS.—Not the least of the many objects of interest which met my eye upon the above occasion, were the pots of cucumbers, squashes and melons, all in a bearing condition. Mr. C. expressed the opinion that, for gardens, it would be economy to start these plants in pots, under glass, and after the ground was prepared to receive them, and the plants were beyond the reach of bugs, to *set the pots into the ground*, without disturbing the plant. His remarks upon the subject so commended themselves to my mind that I tried the experiment last

spring, with some marrow squashes. I took several plants which had been kept in five-inch flower pots until they were too large to be relished by the bugs, and transferred them to the garden. All but one of them were carefully tipped out of the pots, without breaking the ball of earth, and as carefully set into the ground. The one pot was simply set into the ground so as fairly to cover the top of the pot. In order to make sure that no favors should be found on its side, this plant was set in the poorest soil of the whole row. All the plants were covered with musquito netting for a few days, and the one in the pot was also watered a few times, when the boxes were removed, and they were left to take care of themselves. For a short time the bugs almost literally covered them, but were compelled at last to abandon them uninjured. The single vine seemed to grow more slowly than the others, and at no time during the season was it as large. On gathering the fruit in the fall, I took from this vine three well ripened squashes, weighing together *thirty-nine pounds*. This I found to be fully equal in weight to the average of the other vines, and also to vines in the garden planted in the usual manner. On taking up the pot, I found that no roots had entered the ground over the top of the pot, and but a single root, about the size of a pipe stem, had passed into the earth through the hole in the bottom. Through this single root, then, must have been drawn all the earth nourishment for maturing both vine and fruit. Experiments made at the same time with cucumbers, and melons, have convinced me that, for gardens, Mr. Chamberlain's plan is a good one, and the coming spring I propose to treat all my vines in this way. The same plan will also apply to flowers, and a small propagating case is amply large to start all the flowers, melons, vines, &c., that can find room in an ordinary garden.

DWARF POT FRUIT CULTURE.—I found Mr. Chamberlain to be not only completely at home in all relating to the culture of fruit trees and vines in pots, but confident that the time will soon arrive when it will become so common as to cease to be novel. During his experience with Mr. Rivers, he had not only seen the system made possible and practical, but positively *profitable*. If it was successful in England, he was confident it might be made successful in this country, and he was determined that it should be made so. He had several hundred pear, apple, peach, cherry and other fruit trees, and a large number of grape vines, in pots, and in various stages of growth. They were of various ages, from one year to six or more years old. I saw pear trees which had been taken from the ground, in a common nursery row, *when four years old*, and placed in a twelve or fourteen-inch earthen pot, and, so far as I could judge, they were in a thriving condition before the end of a twelvemonth. All his trees had been purchased from ordinary nurserymen, and while they did not give him the satisfaction which those more carefully propagated and trained would have done, they demonstrated more forcibly the practicability of his system of culture. At the time of my visit, every tree and shrub out-doors were covered with a thick coating of ice, and I was surprised to find a large number of pear trees in pots standing on the north side of the hot-house, entirely unprotected, and covered with sleet like the rest. I was told that they had been in that bleak

situation all winter, for want of room inside, but no fear was expressed as to their suffering any injury thereby. Inside, in the reserve-room, I saw a large number, of various ages, waiting their turn to be placed in the forcing-house. Their plump fruit buds showed plainly that the cultivator's expectations of a crop of fruit from them, at least, *looked* reasonable. In the forcing-house were a variety of pears, peach, cherry and plum trees, and grape vines in pots, and showing fruit in various stages of growth. If my judgment was not sadly at fault, they were all in a healthy and thriving condition.

Among the novelties in this collection, was a *pear tree with endless limbs*—i. e., with every limb inarched. Some of the limbs were bent around and ingrafted upon themselves, others were ingrafted upon the trunk, and in several cases the ends of two limbs had been ingrafted upon each other. Being thus prevented from making a free growth of wood, the whole energy of the roots was compelled to the task of perfecting the fruit. The tree had not, as yet, fruited, but the large and well-formed fruit buds gave promise of success in the novel experiment.

FRUIT BASKETS.—But among the many objects of interest in this model establishment, none so enlisted my attention and curiosity, as Mr. Chamberlain's newly invented fruit baskets. These may be described as baskets (of any desired form,) made of open wire work, with a tin dish, or pan, inside. In this inside dish is placed a quantity of charcoal, bone-dust, &c., in which the roots of the tree, or vine, are planted, and they are then well covered with moss, which is, of course, kept constantly moist. Further nourishment is supplied in the form of liquid manure. Planted in this manner I saw peach, cherry, plum and pear trees, and grape vines, flourishing in the most gratifying manner. I took down one of these baskets from its hook, and counted twenty-six peaches, of about bullet size, on the tree contained in it. Grape vines, prepared in a similar manner, exhibited large and handsome bunches of fruit. I was assured that *not one of these baskets contained even a spoonful of soil*, or earth, and yet the trees and vines appeared to be in a most flourishing condition. After fully explaining the construction and philosophy of his invention, (for which he has received letters patent,) Mr. Chamberlain informed me that at least one person, who claimed to have visited his place and seen his specimens of fruiting trees and vines in baskets, had gravely pronounced the whole thing a *humbug*, and in the columns of the *Horticulturist* had declared that the specimens of peaches, grapes, &c., on these trees and vines, were *artificially fastened on*, to deceive the public. Mr. C. therefore called my particular attention to the specimens, and expressed the hope that I would expose him, if I found any appearance of fraud or deception in the matter. I made a rigid examination, and was fully convinced that there was no humbug about the invention. Having since read the article referred to, I must confess that the writer, if in earnest, was either very blind, or purposely misrepresents. Since my visit, Mr. Chamberlain has exhibited specimens of his trees and vines in baskets, at various horticultural exhibitions, where they have been seen and examined by many thousands of persons, without the detection of any fraud in

them. Not only this, but many others are now meeting with equal success in similar cultivation, and the sale of these patent fruit baskets is already quite extensive.

AN HOUR WITH THE MILCH COWS.

We recently had the pleasure of visiting the barn of Mr. ABIEL H. WHEELER, of Concord, in this State, of looking at his herd of milch cows, and learning from him some of his ideas as to the best stock for milking purposes, and the manner in which he feeds and shelters them, in order to secure the largest possible product of good milk.

His barn is 85×41 feet, nearly all the north-west side being used as bay room for hay, and his stock consists of twenty cows, two horses, two bulls and several swine. The bulls are pure Ayrshires, are matched, hardy and docile, and are usually in the yoke whenever there is heavy work to be done. He has pure Ayrshire cows, and thinks this stock, for milking purposes, as good as any of the favorite breeds among us. He cuts about 60 tons of hay annually, and on a portion of his land at the rate of five tons per acre. The cattle are all confined in stanchions, in one lean-to, and are bedded with fine, pine shavings from a neighboring pail factory, or with pine leaves gathered from the forest. The cows were all scrupulously clean, no droppings or dust being allowed to accumulate upon them—of course the floors under them were clean and sweet.

His mode of feeding is as follows. All the various kinds of fodder, excepting corn fodder, are cut, and the straw and different qualities of hay are mixed, and fed dry. The cattle eat this so readily that he says not a bushel of orts has been left from it during the winter. Each cow also receives in grain of some kind what is equal to three quarts of corn meal per day, which is fed by itself. The corn fodder is fed to them uncut, from which they take what they please, and the remainder is worked up with other coarse litter for manure. Under this feed the cows keep in good condition, and yield a liberal flow of milk. He thinks this a profitable mode of using the fodder. The cattle are tied up at night through the year, and are always supplied with abundant manure-making materials. The barn-yard is dishing, and amply covered with litter and muck to absorb all the liquids that fall upon it.

His barn-cellar is of equal extent with the barn itself—the north side being filled with the various vehicles of the farm, and the other side with the droppings, where a stout hand was overhauling, pulverizing and mixing them with muck, sand, pine leaves, or such other materials as he had stored up for winter use.

Mr. WHEELER has one acre and one-fourth in asparagus. This is cultivated with care, and has

brought him in cash the sum of \$500 in a single year. The asparagus tops are deposited in the barn-yard, in the spring. He top-dresses his grass lands liberally in the fall and keeps them well seeded, which may account for the product of five tons per acre which he has cut.

Near the buildings he has a fine orchard of 300 or 400 young apple trees, and about 50 pear trees, which greatly improve the appearance of the farm, and which promise to be a source of future profit. Every thing about his buildings—so far as a winter view could go—appeared convenient and tidy. The stock was warm and contented, the buildings themselves in good repair, the wood-houses filled with dry wood, and both wood and water so “handy” as to have a strong tendency to keep all the family in a complacent frame of mind.

Mr. WHEELER is one of the best plowmen probably in the States, and few, if any, have carried away more prizes from the field of competition than he has. He not only superintends, but takes a leading part in all the labor of the farm, and during the winter has the entire charge of the stock. Indeed, if we saw anything in which we thought he should make a change, it is that he should labor less. He is at present the President of the *Concord Farmers' Club*, where he presides with great punctuality and promptness, and evinces the same enthusiasm that he does in all that he undertakes.

Mr. W. has a son in the army, now a prisoner at New Orleans. He was taken at Bull Run, while remaining by the side of a sick associate.

For the New England Farmer.

DISSEMINATION OF FOUL SEEDS.

MR. EDITOR:—Can there not be some remedy devised to prevent the vending of foul seeds with the seed we wish to purchase, and also to compel negligent, slovenly farmers, to extirpate all noxious weeds and plants that are liable to be carried by the wind and birds to the premises of adjoining neighbors?

I am of the opinion, that most of our hay seeds contain more or less foul seed, and that many a careful farmer finds himself taxed with many a weary day's work in consequence. I think this is a growing evil, from the fact that I see many more noxious, worthless plants than formerly, in all the region I am acquainted with. I know of many farms that are so overrun with wild carrot as to diminish the rents fifty per cent., and in some cases even more. These are, or were, valuable lands on the south-east end of Rhode Island. From the opposite side of the bay, many of these farms, when the carrot is in bloom, are as white as if covered with snow. Plowing don't destroy it, and mowing seems to spread it, as the root sends out immediately numerous shoots to take the place of those cut off. It is a kind of hydra monster. Nothing but plucking it out by the roots will extirpate it. It is now quite common all through

this section, and if suffered to increase, will greatly diminish the value of our farms.

I could mention several other plants that are a great nuisance and evil, but will confine myself to but one more, viz., Johnswort. I have been credibly informed that, in some parts of New York State, this plant has so got the upper hand of the farmers that they have given up some of their fields to its entire possession. Within sight of where I live, is a farm that is fast coming under its pestiferous power. The owner don't seem to care much about it; thinks he can get on, somehow, as long as he lives, and on the principle of "after me, the deluge," bequeaths to the coming generation a heritage of expense and trouble.

For one, I do not believe we have a right to act, or not act, without reference to the future. How is it possible for any one to reconcile such a course with moral right? Each succeeding generation should strive to excel its predecessor in all that is calculated to promote the highest good of the present, and of generations to come. Gratitude, and not remorse, would then be the heritage of all, and the world a comparative paradise. But to return to our subject. The evil is upon us. What is the remedy? Will not some of your numerous correspondents tell us, or at least give their views of the matter? Can we not have a law that will reach this case? Could not seed inspectors be appointed, and licensed seed stores be established, where the farmer could go and be sure of getting a pure, unmixed article? In the case of the negligent farmer, who suffers his lands to be overrun with weeds to his neighbor's injury, could we not by law require him to cease injuring his neighbors? He has no just right to do it. Why not restrain him by penalties? O. K.

Rochester, 1862.

AGRICULTURAL SOCIETIES.

WORCESTER NORTH AGRICULTURAL SOCIETY.

—We have before us the Transactions of this Society for the year 1861. The annual Exhibition took place at Fitchburg, Sept. 24, 1861. We learn from them that the show in vegetables was far superior to any before presented; that of flowers was brilliant; the mechanic arts and manufactures were also liberally displayed, as were the articles of bread, butter, cheese, pickles, honey, preserves and wines. There was no regular address, but after dinner appropriate remarks were made by several persons. The officers for 1862 are:

President—L. H. BRADFORD, Fitchburg; *Vice Presidents*—Leonard Burrage, Leominster; Benjamin Wyman, Westminster; *Secretary*—W. G. Wyman, Fitchburg; *Treasurer*—F. C. Caldwell, Fitchburg.

RUTLAND COUNTY AGRICULTURAL SOCIETY.

At the annual meeting of this Society held at Rutland, Vt., January 1, 1862, the following officers were elected:

President—JAMES M. KETCHUM, Sudbury; *Vice Presidents*—Jesse L. Billings, Rutland; A. D. Smith, Danby; *Secretary*—Henry Clark, Poultney; *Treasurer*—Hon. Zimri Howe, Castleton; *Auditor*—H. W. Lester, Rutland.

For the New England Farmer.

WINTER.

BY R. F. FULLER.

Now the winter is invested
With the downy, feathery snow.
Every mountain-top is crested,
And the valley clad, below.
Winter's ermine, as a ruffle,
Leafless woodland seems to deck;
And the pines are like a muffle
Of warm furs, around his neck.
See! the cloud-attended morning,
All effulgent to the view;
And the sparkling snow adorning,
Almost with a rainbow hue!
In the forest, now, I wander—
Yes! the winter's face to see.
Every lesson I will ponder,
That the seasons show to me.
Hark! a whistle, flute-like, airy,
Like a signal, clear, and sweet!
'Tis, perhaps, the reigning fairy
Winds her horn, in this retreat;
"Chickadee!"—music cheery!
'Tis the spell of memory, then,
In the woodland, waste and weary,
Wakes the summer song again!
No! the birdie, bounding, leaping,
Lights upon the feathery snow!
Soft the breast of winter, sleeping—
Would, for thee, 'twere always so!
Say, thou plaything of the breezes!
When the winter, wan and cold,
In the moaning forest freezes,
Where is, then, thy little hold?
"Chickadee!" chants the fearless,
Flitting bird, upon the tree:
"Never would your heart be cheerless,
Had you confidence, like me!"

I will study, then, the winter,
In its ever varied phase—
When the snowy sparkles glimmer
In the bright and sunny days:
When the air-filled flake, descending,
In the day or in the night,
Seems as if the heaven, bending,
Would upon the earth alight:
When the stars shine out with pleasure,
On the mirror of the snow;
While a galaxy of treasure
Seems the spangled bank, below!
—We have all a winter season,
When our scanty lives we close:
It is fitting we should reason
Of the winter and the snows!
Shall we, then, so peaceful slumber
As this sunny, snowy day;
Or the dreams, that conscience cumber,
Frighten our repose away?

THE MOSS-LANDS.—The moss-lands are formed, not by the perpetually diffused burden of mist, but the going and returning of intermittent clouds. All turns upon that intermittence. Soft moss on stone and rock; cave fern of tangled glen; wayside well, perennial, patient, silent, ever thus deep, no more, which the winter wreck sullies not, the summer thirst wastes not, incapable of stain as of decline, where the fallen leaf floats undecayed and the insect darts undefiling. Crossed brook and ever eddying river, lifted even in flood scarcely above its stepping-stones, but through all sweet summer keeping tremulous music with harp-

strings of dark water among the silver fingering of the pebbles. Far away in the south the river-gods have all hasted and gone down to the sea. Wasted and burning, white furnaces of blasting sand, their broad beds lie ghastly and bare; but here the soft wings of the sea-angel droop still with dew, and the shadows of their plumes falter on the hills; strange laughings, and glitterings of silver streamlets, born suddenly, and twined among the mossy heights in trickling tinsel, answering to them as they wave.—*Ruskin.*

VINEGAR IN TWENTY-FOUR HOURS.

The whole philosophy of the manufacture of vinegar is included in the word oxydation, the alcohol contained in cider, beer, or wine, combining with the oxygen of the atmosphere, becomes acetic acid, which in a diluted state is vinegar.

The methods usually pursued in the domestic manufacture of this article are, to say the least of them, susceptible of improvement. The conversion of cider into good vinegar, by exposure to the air in casks, requires weeks and even months to accomplish; because, only a small surface is exposed at one time to the oxydizing action of the atmosphere.

By exposing a larger surface of the liquor to the atmosphere, oxydation takes place with corresponding rapidity, and the process may be completed in from twenty-four to forty-eight hours.

The method of accomplishing this rapid acetification, which has long been known to scientific men and manufacturers, may be pursued without difficulty in private houses, as follows: Take a clean flour barrel, and bore auger holes all around the sides, and in the bottom; set it over a flat tub or open cask, and fill it light with beech shavings which have been soaked in vinegar. On top of this barrel, which is open, lay two strips of wood, and resting on these, a pail filled with cider, beer, or the like. Procure twelve or fifteen lengths of cotton wicking, about thirty inches long: which, after dipping in the liquid, arrange round the sides of the pail at regular intervals so that one end of each wick will be hanging in the cider, and the other one hanging down outside, and below the bottom of the pail. By means of these wicks, the pail will gradually be emptied of its contents, which, trickling over the shavings, will be exposed to the air, absorb oxygen, and finally be received in the tub beneath. By returning the liquor into the pail above, and suffering this trickling process to be repeated two or three times, a splendid vinegar will be obtained. The whole secret of the process lies in the mechanical increase of surface accomplished by the shavings.—*Scientific American.*

REMEDY FOR RINGWORMS.—The *North British Agriculturist* says that the disease locally known as ring worm or tetter, which shows itself about the head and neck of young cattle, in the form of whitish dry scurvy spots, can be removed by rubbing the parts affected with iodine ointment. The disease may also be combated by the use of sulphur and oil; iodine ointment is, however, to be preferred. As this skin disease is easily communicated to the human subject, the person dressing the cattle should wash his hands with soap and hot water after each ointment.

For the New England Farmer.

POVERTY OF SHADE.

MR. BROWN:—I am so confident that you desire to give only sound doctrine to the readers of the *Farmer* that I venture a criticism on one of your "replies," with the full confidence of your willingness. In the weekly *Farmer* for Jan. 11th, in answer to "SUBSCRIBER," from North Dunbarton, N. H., you say, "Perhaps the better way would be to sow oats or barley with the grass seed, and cut them for fodder. This course would not materially exhaust the soil, and the oats might, in some measure, protect the young grass, and give it an opportunity to escape drought, if it should ensue."

It is a very common idea that the shade afforded in such case is more than an offset for the moisture-exhaustion which it costs. But such is not the case. While the roots can get moisture, the plants will not dry up because of the power of the sun upon them. During last summer we had a severe drought. I had a piece of ground under my care sowed with oats and grass seed. On a part of it the oats were cut down by insects, so as to leave scarcely a blade. There the grass lived through the drought. On another part the oats stood unharmed by insects. There the little grass roots all died from the severity of the drought. Certainly it was from this cause that the grass failed there.

In a field of potatoes, also, where perhaps an eighth of an acre had a crop of coarse weeds which lived in defiance of the hoe, there the soil became so extremely dry that the potatoes died of thirst; while the case was different on precisely the same kind and condition of soil where the weeds had been subdued. The shadow of a weed will never pay for the moisture it steals in time of drought, and the same principle will hold good against oats or barley in a water-account with the soil. The more roots there are to suck the parched soil the sooner its moisture will be gone. Naked soil will retain moisture beyond that which is thickly covered with growing grass or grain. A row of corn, skirting grass-ground, will curl up from drought before one would at a distance from where so many roots are sucking. A weedy piece of ground will suffer worse than a clean field.

Lee, N. H., Jan., 1862.

COMINGS.

REMARKS.—You judge us correctly, friend COMINGS, in supposing that we "desire to give only sound doctrine to the readers of the *Farmer*." Our language, you will observe, was quite guarded. Before proceeding, let us see what the point at issue is: It is *not*, what course of culture will produce the largest crops of grass, but, simply, what circumstances will best promote the germination of grass seed and its *early* growth?

In the *first* place, the oats were to be cut green—not allowed to seed—which would leave the surface free for the young grass after it had got fairly started, and not "materially" exhaust the soil—that is, compared with the exhaustion when oats are allowed to mature.

Secondly, oats start quick, partially cover the surface, and thus prevent a large amount of *evap-*

oration, keeping moisture in store for themselves and the young grass, by absorbing moisture from the air, as well as exhausting it from the soil,—for the plants are living and breathing organisms, and a mutual action is continually going on between them and the soil. “They are first fed by the food which the root procures from the earth, and a part of the nutritive matter which is stored up in the seed-leaves. They feed especially upon the latter until the store is exhausted, and by the time this happens they are clothed with leaves which are themselves *able to feed them* after the seed-leaves have perished.” This is the language of Prof. LINDLEY,—than whom there is no higher authority,—and we cite it to show that the oat plants among the grass receive a *large amount* of their support from the atmosphere, and consequently, do not—in their early growth—exhaust the soil so much as they benefit it by their shade, and the moisture they bring to it from the air. At any rate, not so much as is stated by our correspondent. Both HALES and DUHAMEL—among the very highest authorities—say that branches imbibe moisture nearly equally by either end; and consequently the sap moves with equal facility *both upwards and downwards*. M. BONNET states that “leaves will imbibe *enough of water to support the vegetation* of a whole branch, and the leaves belonging to it.” This does not look as though the leaves of the oat plant were made merely to *rob the soil*!

Our friend may sow the seeds of the elm, maple, birch and pine, on a piece of *unsheltered* land, and he will find that a large proportion of the plants—if they come up at all—will perish; but if he goes to the forest, cuts the trees and brush, scrapes away the leaves, stirs the soil, and sows the same kind of seeds *there*, they will not only come up, but under the genial protection of the surrounding trees and shrubbery, will grow and flourish in surprising numbers. He will find this piece of soil, *in the forest*, although *no mulching lies upon it*, moist and soft, when the pastures in the vicinity are parched and barren.

Was not our suggestion in accordance with the almost universal practice of farmers, who sow oats or barley with grass seed, *not entirely* because they *desire the crop of oats*, but because the oats themselves are, in some degree, a protection to the young and tender grass plants? A very successful farmer informed us, a few days since, that he invariably sows three bushels of oats per acre with grass seed, and that he secures the best results under this practice, which has been continued through many years, because it is a successful practice.

It is our practice to sow grass seed among standing corn, and we have never failed of securing favorable results under ordinary circumstances—but

always the most satisfactory *where the corn stood the thickest*, although on soil of the same quality and in the same position. We have heretofore urged this as a reason for laying lands to grass while the corn is standing.

We are informed that where coffee is cultivated, it is always done under the *protection of trees*; that although the trees spread their roots far and wide, they are *condensers of moisture from the air* as well as extractors of it from the soil, and are thus of essential benefit to the young and tender plants. On the same principle, pasture lands are much benefited by occasional shade trees scattered over them,—and we believe it is generally admitted, that such pastures afford more grass than those entirely bare of trees. That though the trees sap the soil, their other beneficial action upon it is more than balanced by the drafts they make upon the soil itself. FOURCROY—another high authority—says: “In clearing up new lands, the trees on the summits of hills should be left standing. They attract the vapor that floats in the atmosphere, and the rains, and serve as *conductors* of that element to *moisten the ground*. By their shade they retain the verdure and feed.” This is precisely the case.

Another advantage of the oats is, that they *check the currents* of wind, and thus prevent evaporation, in a great degree. This point needs no argument, as all admit that hay dries much faster when there is a wind than when it is still; the wind rapidly carries away the natural evaporation of the soil, which is continually succeeded by new moisture and carried off by fresh currents, and thus rapidly desiccates the ground. The oats tend to keep these currents from the young grass, and consequently a large portion of the evaporated moisture is kept among them.

The difference of opinion entertained, seems to us to arise from the fact that *no credit is given to plants for the absorption by them of water from the atmosphere*. If they did not receive and impart it, how long would it be, in the absence of rain, before the soil would become utterly unfit to sustain a plant? We quote Lindley again: “If the branch of a plant is placed in a bottle of water, and the neck of the bottle is luted to the branch, so that no evaporation can take place, nevertheless *the water will disappear*; and this can only happen from its having been *abstracted by the branch*.” This is just the action which we ascribe to the leaves of the oat plants as they stand among the grass.

As we have this high authority before us, let us quote again from it: He says—“Since a plant does not perspire [sweat] at night, and since its absorbing points, the roots, remain during that period in contact with the same humid medium [that is, the soil] as during the day, *they will at-*

tract fluid into the system of the plant during the night, and consequently the weight of the individual [the plant] will be increased. In like manner, if plants in the shade are abundantly supplied with moisture at the roots, *they will also gain more than they can lose*; and as this will be a constant action, the result *must necessarily be to render all their parts soft and watery.*" The oat plants, *while the grass is young*—and this is the only time which we are discussing—keep the grass both *shaded and moist*, and the result follows which Prof. Lindley has just described.

The above shows the *means* of keeping the ground moist, as we suggested to our Dunbarton correspondent, and the following from the same high authority already quoted, shows its importance, viz.: "As a general rule, therefore, we are authorized to conclude that the ground should be abundantly supplied with moisture when plants *first begin to grow*, and that the quantity should be diminished as the organization of a plant becomes completed." On this point, however, there is probably no diversity of opinion. We find further confirmation of our views, in Davy, Doctor Ingenhouz, Senebier, and others.

Let us, in conclusion, revert for a moment, to the point at issue, as, if we adhere strictly to that, an agreement will be more likely to take place. It is *not*, what course of culture will produce the largest crops of grass, but, simply, what circumstances will best promote the germination of grass seed and its early growth?

We have thus given some of the "reasons" for the "faith that is in us." They are general principles,—and not the results of one or two isolated cases, upon which it is never safe to build up a theory.

We cordially thank our correspondent for his criticism, so frankly and kindly expressed, and sincerely desire to be free from all "hobbies," and to be wedded to no theories or opinions, merely because we once entertained them. If they cannot stand the test of fair criticism, we mean to relinquish them, and be found on the "progressive road," shoulder to shoulder with our long-tried and intelligent correspondent, "COMINGS."

PRESENTS FROM JAPAN.

The new Japanese presents just sent to the President of the United States from the Tycoon of Japan, are the finest that has ever been seen in this country. A lacquered box containing a letter thanking the President for the reception of his ambassadors—in most courtly phrase in characters as stately as those usually found upon the sides of a tea box, wrapped in the yellowest of yellow silk, with plenty of gilt. A sword of exquisite steel, with the handle bedded with large pearls and mounted in the finest gold. Blocks of crystal from the sacred Fusi-yama Mountain, of

diamond clearness. Vases of antique bronze, exquisitely sculptured in relief with tortoises and stones of untold value. A punch bowl fit for a Cyclops to "wet his whistle" in, so large that the President's two sons curled up in it and the cover was put on; candlesticks some four feet high, gold mounted, with vases of every variety of pattern and shape; an entire suite of armor quite worthy of the middle ages. The people are anxiously waiting to have these things sent to some place—the Smithsonian or the Patent Office—where they can get a glimpse at these gems of crystal, steel, bronze or porcelain. A whole dinner set, with hundreds of pieces of Japanese crape, silk and brocade, forms a part of this royal present.

For the New England Farmer.

WHAT SHALL I RAISE?

MR. EDITOR:—I desire, through your columns, to inquire how, in *these times*, farming can be made profitable? My farm is composed, mainly, of mowing and tillage land, lying in the meadows which skirt the banks of the Connecticut river, in Hampshire county, of this State. This land is worth from one to two hundred dollars per acre. Crops raised in this town and vicinity consist of Indian corn, broom corn, hay and tobacco. The price of Indian corn the past season has ranged from fifty to sixty-five cents per bushel, and broom corn four to five cents per pound; the low prices of these commodities, I suppose to be mainly owing to the great quantities of the same that are produced upon the fertile fields of the West, in connection with the comparatively small outlay for their production there. Taking the estimated value of our land, and the price of labor, it requires no argument to prove that these are not profitable. The hay crop, so far as it is produced for the purpose of fattening cattle for market, is, if anything, worse for the farmer than the raising of Indian corn and broom corn. The tobacco crop is the only one that remains to be considered. My neighbors find the raising of this article very profitable; but I, believing its use not only useless, but positively injurious, choose not to raise it.

Now, Mr. Editor, will you, or some of your correspondents, inform me what is the best course to be pursued to render my farm profitable? You will, of course, understand that the high price which tobacco brings in market, increases the price of labor among us, as well as the price of land, and consequently, those who do not raise tobacco must pay the same wages for hired labor, as those who do. The price of land is also graduated upon the price of tobacco.

HAMPSHIRE.

Jan. 7, 1862.

REMARKS.—The letter of our correspondent is a "poser," we confess. We admire his stern principles, and heroic determination not to yield to "the tempter." It seems to us that land situated as "Hampshire" describes his farm, and valuable as he estimates it, must be capable of bearing large crops of hay,—and perhaps root crops,—say *carrots*, or *parsnips*. Hay, pressed, or the root crops, could be sent to a distant market, if they are not salable near by. Or, perhaps, by temporarily set-

ting a lower estimate on his land, he could afford to raise other crops,—Indian corn, wheat, barley or oats—and wait patiently for better times.

If a market for them is not too far off, could he not cultivate the small fruits, especially strawberries, or asparagus, and find a fair return from them? The latter crop is made very profitable by many persons living twenty or thirty miles from any large market.

It is quite probable that there are some particular localities, where farming is less profitable than it generally is; and so it must be with the carpenter, tradesman, and any other occupation.

EXTRACTS AND REPLIES.

PASTURE—COMPOST HEAP—SUBSTITUTE FOR ASHES—A LOAD OF MANURE.

1. I am clearing a piece of ground which has been used for more than half a century as a cow pasture; for several reasons I do not wish to plow it. Will you inform me through the *Farmer* if ground bone or superphosphate of lime would be good for a top dressing, and if so, how much to the acre? Or what can I do to improve it?

2. I have several cords of soil composed of yellow loam, clay and decayed vegetable matter; what can I mix with it to make a good compost?

3. I notice in the *Farmer* that ashes is frequently recommended for composting and fertilizing, and I know that it is good—but I am situated where coal is mostly used, and, therefore, I can not procure wood ashes. Is there anything that can be profitably used as a substitute?

4. Most of the statements published in regard to the application of manure speak of so many loads being used. How much do farmers mean by a load? Would it not be more definite if they were to say cords or bushels?

In return for the information here asked for, I shall be happy, whenever I may be able to communicate for the benefit of your readers. C. G.

Hingham, Jan., 1862.

REMARKS.—1. Bone dust and superphosphate of lime are both good for the old pasture. If you wish to be liberal with it, apply 100 lbs. of the former and 300 lbs. of the latter, per acre, as soon as the ground is bare. Then spread as many bushels of the soil which you speak of, as you can afford on top of the bone dust and superphosphate. Upon these scatter white and red clover, a little redtop, timothy and orchard grass seeds, and harrow thoroughly each way. You may succeed under this process; a slight dressing of fine, rich compost would make it nearly certain.

2. Lime, ashes, bone-dust, guano, superphosphate, fish, sea-weed, wash from the house and barn, are all good. If you can find a cask of damaged potash at low price, dissolve it and sprinkle the heap, overhauling it for the purpose.

3. Stone or oyster shell lime can, in some measure. See preceding answer.

4. A cord of manure is about 100 bushels. The common ox-cart, even full, holds about 25 bushels; heaped, about 30 bushels; so that a cord of light manure will usually be hauled at three loads. We think it would be better to use the term "bushels" or "cords" in speaking of quantities of manure.

HOW TO PACK EGGS FOR TRANSPORTATION.

I often have the question asked, "How shall I pack eggs for transportation?" To all such inquiries I would answer, select a strong, wooden box, fill from the bottom two inches deep with bran or shorts, then wrap every egg in wool and place them, point downward, upon the bran, being careful to leave about half an inch between each egg. After placing the first layer, fill in two inches more with bran, and place the eggs as before. When the box is full with at least three inches of bran over the top layer, jar the box gently so as to fill every cavity between the eggs, screw on the cover marked "eggs," and you may send them by express safely. I have sent eggs of the Brahma fowls by express to every New England State. A gentleman in New Jersey raised 8 chicks from 12 eggs which were packed and sent him by express. I have found that eggs packed in this manner generally succeeded well in hatching.

Salem, Jan., 1862.

JOHN S. IVES.

HOW TO GET AND USE MUCK.

Having seen so much said of muck in the *Farmer*, it has induced me to ask you a few questions on the subject as to its value. Will it pay to get it at this season of the year? If procured in the fall, how shall it be kept from freezing so that it can be spread under cattle?

Chester, Ct., 1862.

A SUBSCRIBER.

REMARKS.—It is an excellent time to haul muck in the winter that has been previously thrown out. Where water does not follow the spade too rapidly, the winter is also a good time to throw it out. Muck that is intended to be used for bedding cattle should be thrown out in the summer, or early autumn, and when dry, carted to some shed, cellar, leanto, or other place of convenient access to the cattle stalls.

A SURE CURE FOR CHILBLAINS.

Soak the feet a few moments for three nights in succession in water in which hogs have been scalded, and it will prove a sure cure for that troublesome complaint.

ONE WHO HAS TRIED IT.

REMARKS.—As such water as our correspondent describes is not always at hand, we suggest that the afflicted drop a pint of wood ashes into a bucket of warm water, and wash the feet in that.

A NICE HOG.

Mr. PRESCOTT YOUNG, of Sugar Hill, N. H., recently killed a hog of the Chester breed, about 18 months old, which weighed when dressed 625 lbs.

A. WELLS.

Sugar Hill, N. H., 1862.

SEED CORN.

Noticing some remarks by "O. K." in the January number of the *Farmer* about seed corn, I thought I would tell what I have done.

I have raised a small kind of yellow corn for more than twenty years. When first raised I could not find two ears on a stalk as often as I can now find three or four, and, occasionally, five to eight, good, sound ears, but some of them small.

I have taken pains to save as many good, sound ears on early stalks as I could for seed, which I think increases the number greatly.

When first planted, I could get from forty to sixty bushels per acre, now I get from seventy to nearly one hundred bushels, by actual measurement, on the same ground and with the same treatment, shelling it in October. E. R.

Hardwick, Jan. 16, 1862.

WARTS—WOODCHUCKS—DOVES.

One of your readers asks for a remedy to cure warts on a colt. I cured one on my colt by washing the warts in saleratus water. I heard it recommended for warts on cattle.

The best way I have tried to get rid of woodchucks is, to turn into the hole two or three pails of boiling water, and take care of the animals when they come out.

I have known doves to be very destructive in pulling corn, but do not think they are apt to, if well fed. A SUBSCRIBER.

Enfield, N. H., 1862.

A ROUSING HOG.

While looking over your paper of Jan. 18th, I saw an account of a fine hog killed by Mr. Erasmus Howard, being 18 months old, and weighing 536 lbs., and also the question—"Who can beat this?" I have this winter killed one 15 months old, weighing 588 lbs. CURTIS PARKER.

Richmond, N. H., Jan. 2, 1862.

For the New England Farmer.

MATCHING STEERS' HORNS.

MR. EDITOR:—I have noticed an inquiry recently in the *Farmer*, how to match the horns of steers, if one horn grows down. In reply to that question I would say that five years since I had a very fine pair of Devon steers, nicely matched, with most beautiful horns, except one horn on one of them inclined to turn down, so as to look very badly, and the question was, how to remedy the defect, and have the horns grow alike. As I had previously tried scraping steers' horns to change their shape, and without any benefit in a single instance, I adopted the following plan:—I fastened a pulley to the floor directly over the steer's head, and another pulley at a point where a weight could safely be suspended, then passed a cord over each pulley, putting one end of the cord on the horn that was down, and to the other end of the cord a weight of two pounds, kept the cord on the horn most of the time during the winter, when my steers were in the stable. In that way I raised the horn so that at the close of the next autumn my steers' horns *matched perfectly well!* Since that time it has been tried repeatedly by farmers

in this vicinity, with the like success. The horns of steers while growing, can be turned in any direction, by the continued use of a weight over a pulley, which is but very little trouble and no injury to the steers. S. C. PARSONS.

New Boston, Mass., Jan., 1862.

REMARKS.—We are greatly obliged to our correspondent for this timely and interesting information.

For the New England Farmer.

RETROSPECTIVE NOTES.

WATER FOR FATTENING SWINE, page 10.—A good work has been done in this brief paragraph; for certainly it is a good work to expose and destroy the influence of an absurd practice or proposal. Some one, it appears, took it into his wise head that swine might fatten better *without* water or drink of any kind than with it, and having "proved it by experience"—alas! that so much of this foolish and false "*experience*," which consists in twisting facts to support a whim or a theory, should find its way into print—gets his absurd notion printed in the *Rural New-Yorker*. This proposal, and the one-sided experience proving it, misled one reader, and so he tries the experiment of feeding sixteen shoats on dry corn, for nearly two months, without water. As might have been expected by any sensible man, "they acted like crazy creatures and a common rail fence would not stop them. They ate but little corn, and I think did not gain a pound." After water was given them, they began to eat, and act as other hogs.

This experiment, it is to be hoped, will find its way wherever the proposal may have gone, and utterly explode it, so that it may no longer have power to mislead any one. But the bane may travel farther than the antidote, and so others be subjected to the *cruel* experiment; for there are so many papers now-a-days which have what is called an agricultural department, and into which the *non-agricultural* editor foists so many absurd proposals and so many *non-practical* items, that it is to be feared the absurdity now exploded, may find its way where the antidote may not be able to follow it. For, in glancing at the agricultural department of some papers, I have seen more that was absurd and likely to mislead its readers, than of what was sensible and practically useful. I have thought this absurdity worthy of notice, chiefly because the admission of *such* into agricultural papers, tends to lower their reputation, and to strengthen the prejudices of many against them; and because every absurdity misleads some one or more.

SEED CORN.—In the issue of this journal of December 7th, of last year, and in the January number of the monthly edition, "O. K." states some facts which will surprise many. It appears that at a recent meeting of the Farmers' Club, connected with the American Institute, in New York city, there was a discussion upon the subject of seed corn, and that so great a diversity of opinion prevailed, as to prove that this subject was *still* involved in great uncertainty. This must cause no little surprise; for here is the most important as well as the most common crop raised

by American farmers,—raised, too, every year, by every farmer since the first settlement of the country, and yet there are questions about it, yea, even about the single subject of the seed, which are not as yet settled, after an experience by millions of farmers for upwards of two hundred years. This diversity of opinion is certainly surprising. It is time that the farming fraternity should consider this want of exact knowledge as to seed corn, and arouse themselves to such carefully conducted experiments as would settle those questions. For their own credit, if not for anything else, the members of that Farmers' Institute, as well as the members of all other agricultural clubs and societies, should arouse themselves, and institute experiments which might settle matters which should have been settled long ago. Surely we have men in our farming communities, yea, even among the readers of this journal, who are abundantly capable, and who have the means and time, if they only had the will or the wish, to carry out experiments in this matter to satisfactory results.

It is some satisfaction to find that, among the members of the Institute, there seemed to be a general agreement about one point, namely, that it is a good practice to select in the field the first-ripened, well-matured stalks, having two ears, in order that succeeding crops may ripen earlier, and be the more likely to have two or more well-filled ears on a stalk. This is a point about which there will be a general agreement among *all* farmers, as well as among the members of the club, and yet, notwithstanding this general agreement *in words*, it is a fact that the *practice* of thousands of corn-planters, in the selection of seed corn, is just such, as if there were no general agreement about the matter. Too generally, the practice seems to be, in selecting seed corn, to take the best-looking ears in the crib, or on their way to the crib, without knowing whether there were one or more ears on the stalk which produced it. Too generally, the seed corn is not selected until spring, and then, of course, there is a risk that there may have been dampness enough about either the cob or the kernels themselves to allow the frosts of the previous winter to destroy the vitality of the chit or germ. Hence, in part, the frequency of failure in the first planting, and the necessity of planting over again, and the consequent lateness in the ripening of the crop, and exposure of it to the risk of injury by frost.

But my object in noticing the article of "O. K." was, to second his efforts to induce farmers to make experiments, in order that certain questions about seed corn may be settled, the settling of which would add both to the credit and cash of farmers.

MORE ANON.

FLOWAGE CASE.

The trial of the action, *Eastman* against the *Amoskeag Manufacturing Company*, at Manchester, N. H., has just resulted, after a three weeks' investigation, in a verdict for the plaintiff for \$200. The trial was designed to test the right of the Company to maintain its dam at its present height, the land-owners above it, on the Merrimac river, alleging that the dam had been illegally raised. The verdict is only for the damage

done to the plaintiff's land by three years' flowage. A bill in equity is already pending to compel the Company to reduce their dam to its proper level, so that this verdict, though of small amount, is of immense importance.

The trial attracted much attention, and was very closely contested. The closing arguments were made by Hon. GEORGE W. MORRISON, for the corporation, and by Judge FRENCH, of Boston, for the plaintiff.

There is no law in New Hampshire by which land-owners can be drowned by mill-owners, without their own consent. It is time, as Gov. Andrew suggests in his message, that some change was made in Massachusetts, by which farmers may have some voice in the disposition of their own land on the banks of streams and rivers. An act by which anybody may flow another's land without notice and without consent, is unworthy of this good, old Commonwealth, or of any other enlightened State.

For the New England Farmer.

GRASS.

BY DR. JOSEPH REYNOLDS.

It groweth everywhere. Its tender blade
Shooteth in the sunshine, and in the shade;
It groweth on the hill-side, and the plain,
By the sheltering hedge, in the shady lane.
It springs by the roadside, under our feet,
In the garden, where beds and borders meet,
Under the shrubs, where blooms the scented rose,
And the wild jasmine and sweet almond grows;
It creeps up the bank, it runs down the slope,
It springs with the crocus under the cope
In the early spring, and stays in the fall
With the pansy that peeps under the wall;
In the fresh meadow, where the waters gleam
In the clear sunlight, and the sparkling stream
Winds its course, now hidden, and now seen,
It spreads its modest, cheerful coat of green.
It groweth everywhere. On the mountain,
In the valley, by the springing fountain,
In the forest, in the field, on the beach,
Just where the daily flowing tide doth reach;
It creepeth close by the shore of the lake,
As its soft rootlets sought their thirst to slake;
The waves that ceaseless lap its foam-crowned lip,
Kiss the green leaflets that stoop down to sip.
The wild deer from the wood crops the smooth turf,
As early he comes to sport in the surf.
The herds of the prairies, with the wild ass,
All find their homes in wide oceans of grass;
The droves of mustangs on Mexican plains,
The tartar's wild horse in Afghan domains,
The goats of the Alps, that climb on the rocks,
The horned zebu, and the fleet springboks,
All ranging free as the birds in the skies,
Crop the sweet herbage that nature supplies.
The soft, modest grass is everywhere seen,
Spreading its carpet of beautiful green,
To cover the scars man makes in the earth,
And smooth o'er the soil that giveth it birth.
When hoofs of war horses trample the soil,
In the rage and strife of battle's turmoil,
When war's iron storm tears up the fair plain,
And ridgeth it o'er with graves of the slain,
The soft grass, in pity, spreads o'er the scene,
Covering it up with its mantle of green.

SEASONABLE FACTS AND SUGGESTIONS.

TOMATO PLANTS IN FRAMES.—It frequently happens that tomato plants in frames grow so tall before the season arrives for setting them out, that they touch the sash, and I have frequently seen the sash propped up to afford them more room. A much better course to pursue is to cut off the tops of the plants. This causes the plant to throw out lateral branches, and instead of a tall, lank, top-heavy plant, you have a strong, stocky one, that will thrive when set out.

CLIMBING VINES.—A neat method of supporting climbers is to take a strip of two-inch plank, two inches wide, planed the full length of the board, and painted green, which set firmly in the ground. Next, obtain from a wooden ware or toy store, two children's hoops, one the largest, and the other the smallest you can find. Now suspend the small one as near the top of the pole as possible, by strings, and fasten the large one close to the ground. Plant your seeds around the outside of the large hoop, and when up, run strings of soft twine regularly from the top to the bottom hoop. It will look better to have the hoops painted green, and the twine should be dark, and not cotton twine.

PHLOXES.—It is strange that this beautiful class of herbaceous perennials is not more generally cultivated. More attention is paid to the growth of them than formerly, it is true; but still there are very few gardens which boast of more than the two old varieties of white and pink phloxes, known by most persons only as the "French Willow." These persons may be surprised to know that there are several hundred distinct varieties now cultivated. Elwanger & Barry, in their catalogue for the present year, have one hundred and fifty-five named phloxes. The period of flowering has been gradually extending, until it reaches from July 1st to the time of severe frosts. There are also several sorts of creeping phloxes, blooming in May or June, and which propagate themselves by runners.

The phlox, in all its varieties, is perfectly hardy, and requires no care whatever, except that the plants should be divided (either in the fall or spring,) every three or four years.

The Phlox Drummondii is one of the most beautiful annuals, (we are almost tempted to say the most beautiful,) with which we are acquainted. Grown in a mass in a border by themselves, nothing can exceed them; as they embrace every variety of tint, and are in bloom for a period of at least three months.

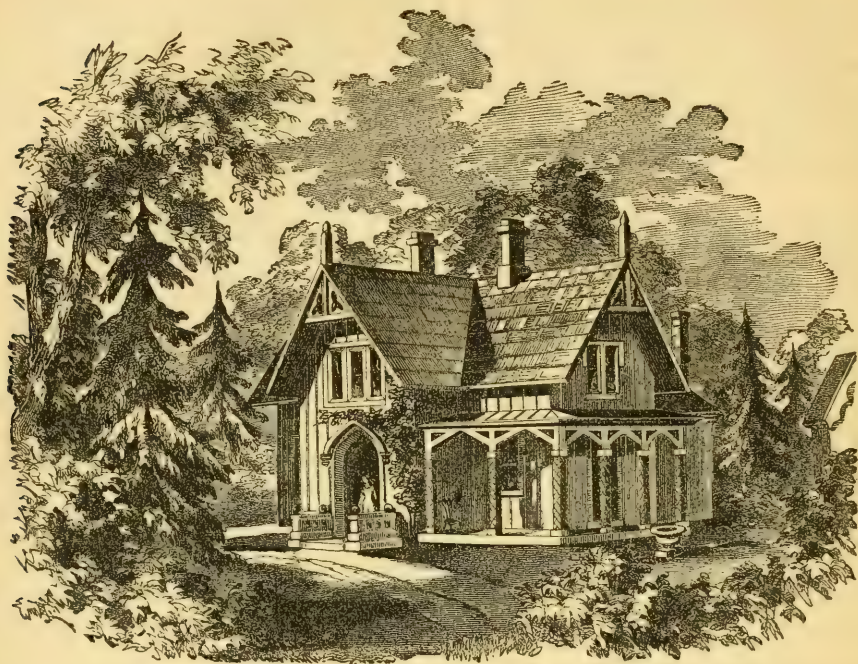
ASHES FOR POTATOES.—Rufus Brown, of Chelsea, Orange county, Vt., says that in an experiment tried by him, the gain in the crop of potatoes by the use of ashes at the rate of a teacupful to the hill, was about a bushel and a half of potatoes for each bushel of ashes used. The kind of potatoes was the "English Pink-eye," and yield 200 bushels per acre. The ground was planted May 7th, with the ashes in holes, and a little dirt over them. It was plowed and hoed June 18th, the rows being four feet apart and the hills three feet. The ashes cost 12½ cents a bushel, and potatoes sold at 35 cents, returning full 50 cents a bushel for the ashes employed.

SOWING PEAS.—S. R. Elliott, of Cleaveland, writing to the *American Farmers' Magazine*, says: "Some years since, I commenced sowing peas, and covering them at different depths, varying from one inch to one foot. I found those buried eight inches deep appeared above the ground only one day later than those buried only two inches; while those that were covered twelve inches deep were a little over two days behind. As they grew, no perceptible difference was noticed, until they commenced blossoming and setting, then the advantage of the deep planting exhibited itself; for those that were eight and ten inches deep continued to grow, blossom, and set pods long after those only two to four inches commenced ripening and decaying. If the soil is light and loamy, I will hereafter plant my peas eight to ten inches deep: if the soil is clayey, I would plant six inches. I never earth up, but leave the ground as level as possible."

The *Michigan Farmer* says "peas may be planted on any good, dry soil at the earliest moment after the surface is thawed out enough to give earth sufficient to make the furrow in which to sow them. The varieties which we would recommend to sow first would be the *Early Kent*, *Dwarf Blue Imperial* and the large *White Marrowfat*. These three varieties, if all sown on the same day, will give a complete succession of this desirable vegetable."

TAR ON POTATOES.—A. B. Dickinson stated, at a meeting of the New York State Agricultural Society, that the practice with the potato was to select out the heaviest, as the best to withstand the blight. He tested his potatoes by putting them in very strong brine. Those that were the heaviest were the best to grow. He cut his potatoes into pieces of two eyes in each. He also stated that he had not planted or sown any kind of seed for ten years without a coating of tar, and in preparing his potatoes for planting he dissolved one pint of tar in three pails of boiling water, and added four pails of water afterwards. This solution he either poured over his seed potatoes, so that each got a coating, or the potatoes were dipped in it and then sprinkled with plaster. He stated that he formerly had no trouble in raising five hundred bushels per acre, but of late he could not do this. Though one year he had raised at the rate of four hundred and fifty bushels per acre, yet he seldom averaged above three hundred bushels.—*Michigan Farmer*.

SEED POTATOES.—B. K. Williams, of Cold Water, Mich., states that he has been experimenting upon seed potatoes for several years, and he finds one-quarter of the seed generally used is an improvement. From one to two eyes in a hill, he says, will produce more potatoes, of more even size, and less subject to decay, than any larger amount of seed. We think our farmers generally have been tending to the same theory for several years, although they have not perhaps carried it to that extent. The English and Irish farmers say that we use three times the seed they do, and that as a consequence we get more small potatoes and less large ones than they do, and not so good aggregate crops.



RURAL ARCHITECTURE.

DESIGN FOR A SUBURBAN RESIDENCE, WITH GROUNDS, BY GEO. E. HARNEY, LYNN, MASS.

DESIGNED AND ENGRAVED EXPRESSLY FOR THE NEW ENGLAND FARMER

In connection with a former plan, we ventured a few hints regarding cottage grounds, with a promise that at some future time we should offer plans for laying out such grounds, showing the location of the buildings, foot-paths and roads, and the proper method of arranging the trees, shrubbery and flowers, so as to produce the best effect, and as a favorable opportunity now offers itself, we know of no more seasonable time for redeeming the promise.

We therefore give at this time, in season for its suggestions to be adopted this year, a design for a simple cottage, with its plan, and the plan of the lot on which it is situated.

This lot is supposed to be located either in the suburbs of some city, or in some country village, where a considerable population has centered—in the neighborhood of schools, churches and stores—facing the village green, perhaps—at all events, in some locality where the lots are larger than the city affords, though more circumscribed than those we would find in the open country.

It is at the intersection of two streets, and comprises between an eighth and a quarter of an acre, devoted to ornamental purposes alone, the kitchen

garden and domestic offices being in the rear, and not included in our present plan.

The dwelling stands back thirty feet from the street, on a slightly elevated spot, which slopes gradually away to the boundaries. A foot-path, five feet wide, starting from the front gate, passes the front entrance, and finally terminates in the open yard in the rear. This, with the carriage-road, which leads from the side gate to the stable, is the only path we have introduced on the plan, nor is it desirable to traverse the whole lot by gravelled walks, tending as they do to diminish its apparent size by bringing the boundaries nearer the eye, and involving a considerable outlay of money and time in making and keeping in order. It is, however, of great importance that what paths we do make, should be made in a thorough manner at the outset. In order to have a perfect road, the soil, in the first place—after the curves have been marked and the lines run—should be excavated from eighteen inches to two feet deep, and all the loam taken away and spread upon some part of the garden; then this ditch should be about half filled with any small stones which may be picked up here and there about the place

and the whole filled up to the desired height with the best gravel that can be procured, taking care to make it a little higher in the centre than at the two sides—say a couple of inches in the five feet path—in order that the surface may better shed what water does not soak through into the drain, and finally, the whole may have a finishing coat of blue screened gravel, evenly spread, and well rolled, and with proper care we shall have at all seasons, firm, dry and clean walks.

The foundation of the ornamental portion is smooth, green lawn, extending to the boundaries on either side, which are hidden by plantations of evergreens and shrubbery, with occasionally a deciduous tree introduced to produce a variety, and give character to the whole. They are mostly arranged in irregular clumps, connected together by other shrubs and evergreens, and planted with a view to obtain as great a diversity of outline as possible, and heavy masses of foliage and flowers, from spring to late in the fall. The clump on the right of the front gate is composed principally of tall growing shrubs and evergreens. In the corner is an American Mountain Ash, the color of whose red berries contrasts well with the heavy green of the two Norway Spruces, one on each

the fence, are a tall Purple Lilac and a Tartarean Honeysuckle. From this clump the range to the stable is as follows: a row of half-a-dozen evergreen trees of good size near the fence—two or three deciduous trees at convenient distances, and between, and forming the clumps, are Purple and White Lilacs, Altheas, Honeysuckles, Syringas, Hawthorns and Laburnums, while the foreground is made up of specimens of the Spirea, Rose Weigela, Japan Quince, Pink Mezereum and Fragrant Currant.

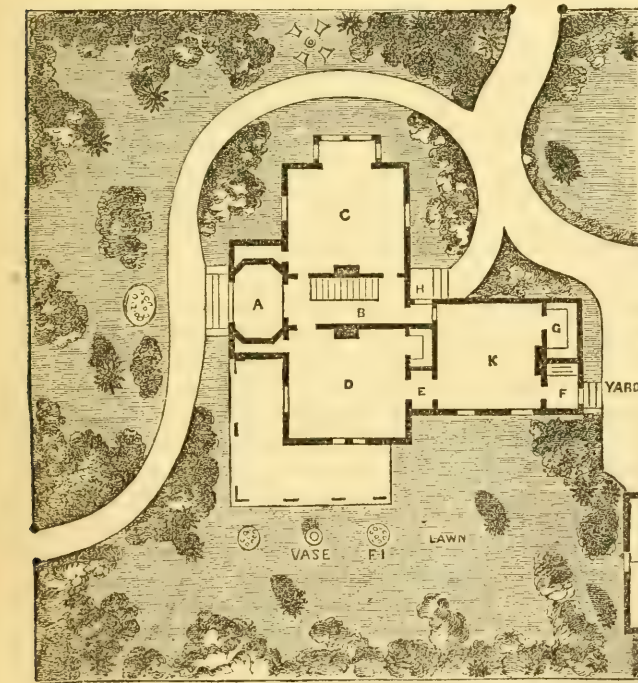
Near the corner of the stable is a group of three or four Evergreens, and between it and the corner of the dwelling-house there is a clump made up of a couple of Firs, an American Mountain Ash, and in the shade underneath, heavy plants of the rose-colored Kalmia and Rhododendron.

In the centre of the lawn is a single specimen of the Larch, which will here have ample room to show its graceful form and light, airy foliage to the best advantage.

Returning to the gate, we have on the left a Sugar Maple and a Scarlet flowered Hawthorn, surrounded by a white Persian Lilac, a Rose Weigela, a St. Peter's Wreath and a Fragrant Currant. Beyond this, and close to the fence, is another specimen of the Scotch Larch, and a little beyond, a Maple or Tulip, or some other deciduous tree of graceful form.

In the corner range, we might have first a Venetian Sumac or Fringe Tree—desirable on account of its brilliant yellow flowers—and near it one or two plants of the Persian Lilac, or white Mezereum. A Tulip tree near the corner, forms the central point of this group, while beyond it, and along the side street, are a Syringa, a red Strawberry tree, a Catalpa, and a mixed Althea, besides a couple of Evergreens and smaller shrubs to fill up the front.

Next comes an area of lawn and flowers, with a view across, into the street, from the bay window, and beyond this, extending to the carriage-road, another group is made up of a Larch, a broad-leaved Laburnum, a tall Silver Maple, Persian Lilacs, and a trimmed Ar-



PLAN OF FIRST FLOOR, WITH GROUNDS.

side or it. Close to the path is a large, flowering Syringa, and in front some low, bright flowering shrub, such as Rose Weigela, Double Tree Peony or Double Dwarf Almond, while farther back near

bor Vitæ tree, with a Fragrant Currant and a Double Dwarf Almond in the foreground.

On the opposite side of the road, we have a Rose Weigela, a white Japan Quince, a tall Ca-

talpa and a couple of Evergreens. From this group an Arbor Vitæ hedge extends to the pump, and will in a few years separate, and partially hide the kitchen garden from the more ornamental portions. A tall Norway Spruce or a White Pine should be set where indicated on the curve of the road, as a reason for making the curve as prominent as we have.

With this we have completed the arrangement of our shrubs. The following list shows the size, color and habits of those we have introduced upon our plan:

ALTHEA, *Hibiscus*—Flowers in August; variety of colors, 4 to 12 feet.
CATALPA—Flowers in July; large white flowers, good for groups, 10 to 15 or 20 feet.
HANTHORN, *Crataegus*—June; white and scarlet, double, 5 to 20 feet.
LABURNUM, *Cytisus*—July; rich yellow, 10 feet and upwards.
HONEYSUCKLE, *Lonicera Tartarica*—May; variety of light color, 5 to 10 feet.
LILAC, COMMON, *Syringa vulgaris*—May; white and purple, 10 to 15 feet.
LILAC, PERSIAN, *Syringa Persica*—May, white and purple, 3 to 5 feet.
SUMAC, VENETIAN, *Rhus Cotinus*—Sometimes called Fringe tree, Aug. and Sept.; bright yellow, 8 to 12 feet.
SYRINGA, *Philadelphus*—June and July; white, 4 to 8 feet.

The above answer for back-ground shrubs. For the foreground we have:

DOUBLE TREE PEONY, *Pæonia Moutan*—May; red, white, purple, 3 to 4 feet.
DOUBLE DWARF ALMOND, *Amygdalus pumila*—May; beautiful rose, 3 to 4 feet.
JAPAN QUINCE, *Cydonia*—April and May; scarlet and white, 4 ft.
FRAGRANT CURRANT, *Ribes fragrans*—May; bright yellow, 3 to 4 feet.
MEZEREUM PINK, *Daphne Mezereum*—April and May; pink, 3 ft. do. white, do. do. *Album*—do. do. white, 3 ft.
SPIRÆA, DOUBLE, *S. prunifolia plena*—June; white, 4 feet.
SPIRÆA, DOUGLASS, *S. Douglasii*—August; fine rose, 3 to 4 ft.
ST. PETER'S WREATH, *S. thalictroides*—June, July; small white, profuse, about 4 feet.
ROSE WEIGELA, *W. Rosea*—June; pink and rose color, 4 to 5 ft.
COMMON PRIVET, *Ligustrum Vulgare*—June; thick, close, white, 5 to 6 feet.

The following do well in shady or damp places:

MOUNTAIN LAUREL, *Kalmia latifolia*—June, July; very rich red, 4 to 6 feet.
HOLLY, *Ilex opaca*—June; scarlet berry, slow grower, near the ground.
RHODODENDRON—July; very luxuriant, rose or white, 8 to 10 ft.

All of the above named shrubs are hardy, easy of culture, and may be procured at any of the nurseries near Boston. The best time to transplant would be about the middle of May, or at the time when the new buds have just begun to grow.

We would not recommend setting out all the shrubs designated on the plan, the first year, but rather let this year's operations be the foundation from which to work in future.

If the buildings are already built, or their positions located, finish up the roads and paths, and as much of the lawn as possible, set the hedges, the larger trees and the principal background shrubs. Let them get well started, and their forms and outlines in a measure determined, and then, by another spring, perhaps, set out the smaller foreground shrubs, so that they may fill up the space, left between the others, and thus form, when

fully grown, thick masses of foliage and flowers from the trees down to the grass.

Flowers may be cultivated wherever a suitable place offers itself. We have marked the positions of a few of the principal beds. Around the house are four large beds of standard roses, which should be selected so as to offer a variety of color and a constant succession of flowers throughout the season, and in other spots are figures cut in the turf and filled with attractive flowers. At the right of the veranda are two circular beds, one for mixed petunias and the other for mixed verbenas, and between them is a vase for myrtle. The large oval bed in front of the house may be filled with tea roses, fuschias, balsams, asters, heliotrope and mignonette, and the five beds opposite the bay window (one each,) with scarlet geraniums, amaranths, feverfews, dwarf coreopsis and nierenbergias, the first named forming the centre bed, and the yellow and purple of the second and fourth alternating with the white of the third and last; and in other places we may have separate beds of candy tuft, phloxes, portulaccas, yellow lantana, mignonette, carnations, tulips, ageratum, &c.

For climbers for the veranda posts, bay window, and door lattices, we have the choice of the following:

CHINESE WISTARIA; a delicate purple, and very luxuriant.
VIRGINIA CREEPER; very hardy, with beautiful autumnal foliage.
TRUMPET HONEYSUCKLE; red and yellow, flowers all season.
PRAIRIE ROSES; beautiful double flowers, and a variety of colors.

The house itself is an example of the simplest rural gothic style. It is one and a half stories in height, and contains three finished rooms below and three chambers on the second floor.

The vestibule, A, is approached from the terrace through the pointed arch and measures eight feet by nine. The hall, B, is seven feet wide and fifteen feet long, and contains stairs to chambers and cellar. C is the parlor, measuring fourteen by fifteen, the principal feature of which is the bay window on the side opposite the door, overlooking the small flower-beds and the side street. The dining or living-room, D, measures also fourteen by fifteen; it connects with the veranda by a mul-tioned window reaching to the floor and opening like the French window. A closet is provided at the side of the vestibule in the front gable and for china, &c., at the other end of the room, furnished with shelves and drawers. The passage, E, which is also fitted with shelves, communicates directly with the kitchen, K. This room is thirteen feet square, and is well lighted by two windows. At the left of the chimney a door opens into a large store room, G, and at the right another leads to the pantry, F. We here have a sink and pump, with a closet and shelves for tin ware. A door opens directly into the yard.

On the second floor, the two principal chambers

measure each twelve by fourteen, and the other, in the gable, ten by thirteen.

This cottage is designed to be built of wood, covered in the vertical and battened manner, and finished inside and out with mouldings of a simple gothic pattern, and will cost, in the neighborhood of Boston, from \$1300 to \$1600.

EXTRACTS AND REPLIES.

CALEDONIA CO. (VT.) AGRICULTURAL SOCIETY.

At the Society's annual meeting, held in January, the following officers were chosen for the year ensuing:

President—HORACE FAIRBANKS; *Vice Presidents*—Harley M. Hall, James D. Bell; *Treasurer*—George C. Barney; *Secretaries*—Horace Paddock, T. M. Howard.

The committee on butter reported that David Currier, of Peacham, was entitled to the first premium. He made from nine cows (four of which he called heifers,) 1729 lbs., being an average of 192 lbs. to the cow.

The first premiums on field crops were awarded as follows:

Wheat—Stephen Richardson, Waterford, 36 4-9 bushels per acre.

Corn—George Goss, Barnet, 146 bushels of ears per acre.

Oats—David Currier, of Peacham, 69½ bushels per acre.

Potatoes—Wm. D. Rollins, Waterford, 410 bushels per acre.

Turnips—David Currier, Peacham, 346 bushels on 28 rods.

Carrots—J. B. Kinerson, Peacham, 47 bushels on 6 rods.

Barley—J. O. Moore, Peacham, 57 bushels per acre.

Other reports were brought before the Society, which, together with further proceedings of the meeting, are of less interest to the general reader.

I. W. SANBORN.

GREAT RYE CROP.

I send you the facts of a rye crop grown last year by me on one acre and a half of ground. The yield was so large I thought it worthy of notice, as you like to hear of good crops. I sowed three bushels and cleaned up seventy bushels by measure. I think, had it been weighed, it would have overrun even that.

J. C. S.

Shoreham, Vt., Feb., 1862.

PLAN OF A SHEEP BARN.

Having followed some of the valuable suggestions that have appeared in your paper, I cut the last year double the hay I did the year previous. I value your paper very highly, and believe one of the best ways to make farming profitable is to take the *Farmer*, and follow its friendly advice. One single copy to me is often worth double the price it costs.

Will some of your numerous correspondents give a plan of a sheep-barn with sufficient capacity to accommodate two or three hundred sheep, to be situated on level land, with necessary details as to apartments, sheep racks, &c. A description of such a barn would much oblige me, for I am now

getting out lumber for one, and shall put it up in the spring.

A SUBSCRIBER.

Romney, N. H., Feb., 1862.

REMARKS.—We hope some of our friends will communicate the information desired in the above communication, as it is needed by many persons.

FAT COW.

The heaviest cow sent to market from Old Caledonia the present season was sold by Messrs. Bigelow, of Lyndon. Its live weight was 1560 lbs.—dressed 1005 lbs., and had 121 lbs. of rough tallow. There are heavier ones still in the country, waiting their time.

I. W. S.

THE APHIS.

Will you, or your entomological correspondent, Mr. F. G. Sanborn, favor us through the *Farmer*, with a brief history so far as known of the aphis—the insect everywhere present of the past season—and oblige other readers as well as

Lyndon, Vt.

I. W. SANBORN.

NEW PUBLICATIONS.

THE PRINCIPLES AND PRACTICE OF LAND DRAINAGE; embracing a brief history of Under-draining; a detailed examination of its Operation and Advantages; a description of various kinds of Drains, with practical directions for their construction; the manufacture of Drain Tile, &c. Illustrated by nearly 100 Engravings. By John H. Kilpart. Cincinnati: Robert Clarke & Co. 1861.

This is an excellent work upon the subject of drainage, written by a person conversant with the subject, and who was willing to go so far into details as to give the reasons why withdrawing water from the soil, tends to make the soil, *deeper* and *warmer* and *more moist* in a dry time, than an undrained soil. It is written in a plain, candid manner, and cannot fail to be of essential service to those who will read and practice its precepts. The subject is one of great importance to our farmers, and demands of them more attention than it has yet received.

ITEMS FROM THE PATENT OFFICE.—Forty per cent. of the letters received at the Agricultural Bureau call for seeds of cotton, tobacco and sorgho. The county of Jefferson, in Iowa, has produced this year 75,000 gallons of sorgho molasses, and 5000 lbs. of sugar. With this result, after three or four years of cultivation, the agriculturists there propose to go into the thing largely.

The same Bureau has just received a large lot of the finest variety of tobacco seed from Havana; also, seeds in abundance of the finest Maryland varieties.

Investigations concerning what is called the "perennial cotton tree" do not go to establish statements concerning it which have appeared in New York publications.

SCALDING ONION SEED.—A correspondent of the *American Agriculturist* writes that a paragraph has been going the rounds of the papers to the effect that scalding water poured upon onion seed will cause it to germinate in a few minutes. He tried it, and lost all his first planting, not a seed coming up.

LEGISLATIVE AGRICULTURAL SOCIETY.

REPORTED FOR THE FARMER BY D. W. LOTHROP.

The fourth meeting of the series was held on Monday evening last, at the Representatives' Hall, and the subject for discussion was—*Neat Stock—the adaptation of different Breeds to different localities and purposes.* Mr. SANFORD HOWARD, of the *Boston Cultivator*, was present, according to announcement, and presided.

He observed that the subject had been frequently discussed before at these meetings, and as he had engaged in the discussion, he was prompted to excuse himself for speaking again. The subject was important, as no nation has attained to a high state of agriculture which does not make this a prominent division of its system. All our domestic cattle are of one species, and indigenous to Europe. In this country we have two native species, the bison and the musk-ox. The bison is a valuable animal and should be preserved, but he is not a good beast of burden. The speaker alluded to some experiments of a gentleman in Mississippi for the domestication of this animal, but found he could not be made serviceable; yet by crossing with this animal a better ox would be produced than cow.

Most of our cattle have been derived from Europe—some from the continent, others from the British Isles, and a few from Asia. By a law of nature, no one breed of cattle is adapted to all localities. He cited the different breeds in Great Britain, and observed that some of these breeds had maintained their purity for a long while. Those on the plains cannot subsist on the mountains, with coarser and less abundant food. Mr. Howard here alluded to the various crossings of different breeds, by cattle raisers, and observed that unless we take pains to breed uniformly, while we might produce some good accidental animals, we could get no breed. Much could be learned by reference to the principles of breeding in England, where cattle are raised with an adaptation to soil and to climate. Cattle not mixed should be regarded as aboriginals. In England they had two specimens of the aboriginal or wild breed. He had examined 100 head, belonging to the Duke of Hamilton, which dated back over a hundred years, and had been guarded against intermixture, yet they have not degenerated, nor will they for all time.

Of breeds prominent in England stand the Devons. They were introduced here in 1816–17, and are divided into two kinds, the North and the South. The South Devons are not superior for dairy purposes, but are used generally for beef. In New England the Devons are used for labor, and they fatten well on light soils, and are fair milkers. The Herefords are good for beef, but not valuable for milk. The Long-Horns were a

breed common in some parts of England, and were much improved by Mr. Bakewell. They were early introduced into Maine, were good workers, hardy and long-lived, and good for the dairy. The Galloways do not succeed for ordinary purposes, but are fitted for a locality. They were of good size, sometimes measuring eight and nine feet girth, and could produce 1600 lbs. of clean beef. Had been introduced into Canada, where they were bred chiefly for the butcher. The West Highlands were a hardy cattle, had long, shaggy hair, with an under fur which protected them from cold and rains in their native place, where they sometimes gathered their own food. They might do well in the Western States. The Kerries were a valuable, small aboriginal breed common in Ireland, and if the people were deprived of them would be obliged to fill their place with the goat. They possessed great power to endure inclement weather. Mr. A. W. Austin, of West Roxbury, has some of this breed, whose milk is about four quarts per day, and very rich. They weigh from 500 to 700 pounds. Another aboriginal breed in Great Britain is the Channel Island, or Jersey cattle. They give the richest milk known, and on the Channel Island, are raised exclusively. We have some good crosses here. The Short-Horns, or Durhams, Mr. H. regarded as an artificial breed, as they were produced by a mixture under the care of Charles and Robert Collings, whose improved herd sold at a great price. The improvement upon the old Short-Horns was evident in greater symmetry of form, richness in milk and fineness of flesh. In fact, on fertile soils they are the very best for beef. Mr. Howard, however, thought that in England crossing had been carried too far, and cited some instances. Another artificial breed was the Ayrshires. In 1780 the nucleus existed in Ayrshire, and in 1790 it had assumed so good a character as to be considered a breed. It is the only dairy breed now in Scotland, is increasing in England, and its introduction is recent here, though some of our herds number from 20 to 70 head. The Rump cattle of India were alluded to and recommended for the Southern States of America, as they stand heat well. They were also good in the harness, and would trot off almost as well as a horse. Mr. H. concluded by a request that gentlemen would give us some facts in relation to the various breeds of cattle, and said the meeting was open to remarks from any one.

Mr. STEDMAN, of Chicopee, spoke to the point, how we could furnish ourselves with the cattle we need. Our natives are "no breeds." Shall we improve these or procure foreign breeds? He thought it best to cross our cows with the best bulls of pure foreign stock, and said the Devon crossed with our native stock very much improved the latter. We should cross, and continue and

persevere in crossing, to produce good results. He spoke of the 180,000 cows in this State in 1855, and thought that by proper intermixture of blood such a herd might have been increased in value as much as five dollars apiece. He deplored the existence of bad bulls, and intimated that they should be, "summarily treated" by law, as in the West. The Durham cross with our natives he regarded the most valuable—the Short-Horns excellent for beef.

Mr. SHELDON, of Wilmington, being called upon, said he had spoken much upon this subject before, for the past twenty years, but it might bear repeating. His knowledge now was the same. For working oxen he thought the North Devons the best, and for fattening, the Durhams. In regard to cows for milk, he said we should pay no regard to breed, and recommended the natives. He spoke of some excellent ones which he possessed, and said he lost one valuable cow by trying to *dry her*! He also alluded to the external signs of a good ox. He should have large nostrils, a hazel eye, rather slim horns, toes straight out before him, and bosom full. Rather than be controlled by breeds, he would sooner run his risk blindfolded at a market, in the selection of good cattle, as he had great confidence in "feeling." In speaking of his own stock—their lack of daintiness, easy feeding, &c., he said he gave some of them to a neighbor to winter, who, mentioning one of them, said "she was a fool, for she didn't know the difference between meadow hay and the best herdsgrass!" Upon inquiry by Mr. Stedman what bull he would choose, Mr. Sheldon replied, "the best he could find!"

Mr. HOWARD spoke of Mr. Sheldon's stock, and commended some of them as excellent natives.

Mr. SHELDON gave a statement of a man who wanted him to fatten a cow, or to buy her. He took her, gave her two bushels of turnips and four quarts of meal per day, and English hay. Yet she fell away in flesh and in milk! The butcher took her, and as she served him the same way, he made way with her before she was still leaner! Mr. S. said, also, that his own young cattle were slight eaters. He referred to the physical points of a good cow: flat horns, lean face, hollow ribs, or open below the last ones, medium-sized bag, and well-shaped, though not large teats. As to color, he preferred a light brindle.

Mr. DAVIS, of Plymouth, found a cow in the woods, which seemed to possess all the good marks of a fine animal. She had been brought up by a Marshpee Indian, and Mr. D. bought her. But her horns were long and tiny, and he was disappointed in her. Mr. Sheldon's feature of the "flat-horns" he thought a good one. He spoke of the importance of blood bulls, and intimated that agricultural societies should offer premiums for

them. He thought the bull had more influence on offspring than the cow; a good bull produces a good cow. The Oakes-cow heifers were worth nothing. And he had had experience that an excellent cow was quite likely to produce a bad calf. The cry that good bulls only benefited the fancy farmers was unfounded. He advised those interested in such matters to look into the English books for authority.

Mr. SHELDON said, in reply to Mr. Davis's theory concerning the influence of the bull, that he differed from him, as he had got better heifers from good cows than from good bulls.

Mr. WETHERELL, of Boston, said that in breeding, the blood on one side should be full. Farmers do not wish to breed from grade sires. With a good bull you are sure to get a good calf. The Short-Horn improves every stock, and it is the bull which exerts the dominant influence. There existed some good grade stock, but it has no certain identity. He alluded to "scrub bulls" running at large in Illinois, their pernicious effect upon stock, and the interference of the Legislature. Our State should not allow a grade bull in its dominions. The product of the Short-Horn is the best, and we should have this stock for the beef.

Mr. HOWARD said some of our best stock were grades. And in England, where they can maintain their identity, they are a breed. He cited experiments on sheep. The Leicesters were once a grade, now a breed.

The hour for closing having now arrived, Mr. STEDMAN moved that the *same subject* be continued for discussion at the next meeting—which motion being sustained, the meeting adjourned.

USE OF FAT.

"What is the use of fat?" It performs several offices; one is to round the system and complete the beauty of the person. Your cousin Jane's smooth neck owes its beauty to the skilful manner in which the adipose matter is packed into all the crevices between the muscles, veins and arteries. For nature expends no small amount of labor in the production of beauty. "Behold the lilies of the field; not Solomon in all his glory was arrayed like one of these!" Another use of the adipose matter is to serve as a reservoir of aliment for the support of the system. In the fever which I recently had, my stomach was in such a state that it could digest no food, and by one of those beautiful adjustments so common in nature, my appetite rejected it, and I did not eat a mouthful for several days. The consequence was that the heat of the body had to be kept up by burning the fat in the system, and how rapidly this was consumed! I suppose I lost twenty pounds in the course of three days. Hibernating animals, that sleep through the winter, are generally as fat as they can be, when they crawl into their nests in the fall. Their thick furs prevent the radiation of heat, so that little is required to be generated;

their breathing and circulation are sluggish, causing a slow consumption of matter, and this matter is supplied by the store of fat in the system, which is slowly burned up during the winter, and the animals come out in the spring as lank as Pharaoh's lean kine. If you put a piece of fat on the fire you will see that it burns with a blaze. Whenever any organic substance burns with a blaze you may be almost sure that it contains hydrogen. The burning of a substance is simply its combination of oxygen. Whenever an organic substance containing hydrogen is sufficiently heated, it is decomposed, and, as the hydrogen is separated from the other elements, it takes the gaseous form. Rising in this hot state, as it comes in contact with the oxygen in the air, it combines with it—in other words, burns; one atom of oxygen combining with one atom of hydrogen, and producing water. There is phosphorus in the bones, which, when separated, will burn with a flame, but, almost invariably, when you see any animal or vegetable substance burning with a blaze—the flame of a lamp, of a kitchen fire, of a burning building—it is hydrogen in the act of combining with oxygen, producing water. On the other hand, when you see any organic substance burning with a red heat without blaze, like charcoal or anthracite coal, it is carbon combining with oxygen, and producing generally, carbonic acid. If the blaze produces a good deal of light, you may be pretty sure that the substance contains both carbon and hydrogen, the light coming principally from the intensely-heated carbon before it is burned.

PREPARATION OF FARMING IMPLEMENTS.

The spring is a proper season for looking up and putting in complete repair the various implements required in the management of the farm. As the late spring is a busy season, it ought to be a standing rule with the farmer to supply himself beforehand with the various implements necessary to prosecute his work profitably. There are few farmers, probably, who are not possessed of sufficient mechanical skill to supply for themselves many of the utensils used on the farm. "Economy is wealth," says the old adage, and it certainly is strict economy to make numerous trifling repairs to the common implements of the farm at home, rather than to send them away, where the cost of travel and delay would be more than the repair itself. But all trades must live, and we shall find that community the most prosperous where the different avocations are sustained by the calls upon each other. Where such is the case, the farmer, as well as the mechanic, the manufacturer and merchant, are all accommodated, the wants of each being at once supplied at home, so that the whole community feels the quickening impulse, and prospers upon it.

Some recommend that the farmer shall make some of the implements himself, which he uses—such as plows, harrows, or any of the coarser implements. We cannot think this good economy,

because there never is a time upon a well conducted farm, when there is not plenty of work to be done, directly applicable to the farm itself. The putting of a new handle to a rake or a hoe, slightly repairing a broken plow, harrow, or wheelbarrow, may be done by the farmer well enough, and perhaps quicker than he could harness and take either of them to the wheelwright or blacksmith. This would be good economy—and such a practice will justify the purchase of a variety of tools, and the providing a comfortable room and bench where they may be used.

A skill sufficient to make such repairs will sometimes enable a team to go on with the work—and perhaps at a pressing time—when otherwise, it might be necessary to turn it out and make it difficult to get it together again.

For the New England Farmer.

AMONG THE GREEN MOUNTAINS.

MESSRS. EDITORS:—January, the first month of the "New Year," is already numbered with the past; February, the shortest of the twelve, is ushered in, and soon merry spring, the season of birds and of flowers, will be with us again. The earth is quietly reposing beneath its comfortable coverlid of light snow, to prepare for the increase which is said in the promise she shall bestow on man from her bountiful lap,—that seed-time and harvest may not fail those who put forth a manly hand to secure its manifold blessings.

The cold of February may be sharp and piercing, and many of its days boisterous and uncomfortable, and as the poet says, of all the months the least honored and sung; still, it has its pleasures in realization as well as in anticipation, and forms an essential link in the grand chain of months which forms the annual round, for present survey and usefulness, and if properly employed, for future gain and enjoyment. Opportunity is offered for public entertainments, readings, lectures and discussions, and social, fireside chit-chats. Reading-rooms should be frequented, public and private libraries perused, and useful, practical information stored in the mind for future use. No time in the year is better fitted for investigation and study, especially with the farmer, than now. His year's supply of wood is at the door, (or should be,) his grain all threshed, and properly and wisely stored away beyond the reach of the mischievous rat and mouse, and all his "winter work" so well advanced as to give him time for leisure, and rest from the fatigue of outdoor labor.

Let now these leisure hours be properly guarded and cherished; let him appropriate them to his own advantage, by the acquisition of knowledge and general intelligence—such knowledge as will be of especial use to him in his vocation in life, and give him a good understanding of passing events.

The wise and prudent farmer will, in anticipation of the approaching season of activity and toil, now arrange, so far as practicable, all his plans for the farm work of the spring; see that his seed, and that of the best quality, is provided; that his tools and teams are ready for use, and in good

condition for the work before them; then, when the seed-time arrives, the seed will be ready for the sower, the sower prepared for his labor, with a fair prospect before him of realizing in full the important truth, that the work at hand well begun is half done.

Be not idle, then, because of the cold or the storm without. Let the mind be free and active—continually expanding and enlarging as the result of increased thought and study. Hail the storm-king as he whistles by our dwellings; bid Boreas go on his way rejoicing, and make lionish February and March laugh right merrily, by tickling their ribs with the feather of pleasantry and good humor; prompt them by an example of industry and humanity, and thus be enabled to witness at least the happy contrast between the rough and frigid without, and a calm, quiet and sunny within.

L. W. SANBORN.

Lyndon, Vt., 1862.

ST. JOHN'S WORT FOR THE FARMERS.

Every well-directed effort to promote the agriculture of the country, we hail with sincere pleasure. We are willing, even, that some errors should be risked, for the sake of being found on the progressive road. The establishment of an Agricultural Bureau at Washington might be of some advantage, if those who manage it would ascertain what plants are indigenous to our own soils, and which among them are worthy of cultivation and which are not—as well as to explore all the rest of the world for seeds that, perhaps, may be as much of a blessing as has been the chicory or the Canada thistle! If those who manage affairs at the Patent Office are not familiar with our native plants, as well as exotics, it is possible that their labors may prove anything but a blessing to the farmers of the country. We have been led to these remarks by noticing in the last Patent Office Report a list of the plants which were intended for distribution from that branch of the government. We will give but one of them for the edification of our readers, just to show them that there is room for improvement even in that high department. We quote as follows:—

"PLANTS FOR DISTRIBUTION.

"**ST JOHN'S WORT, (*Hypericum corymbosum*.)** This shrub, though indigenous to the Southern States, is but little known throughout the country; yet it has proved hardy in the District of Columbia, and will probably succeed still further north. It is an ornamental shrub, blooming early in the spring. There will be a distribution of 3000 plants in the spring."

Now let us see what Darlington says of it, in his "Weeds and Useful Plants:—" "This is a worthless and rather troublesome weed on our farms; and ought to be diligently excluded."

If there is to be no more discrimination than this, between the useful and the noxious plants, at the Patent Office, its teachings will not stand as high authority among the farmers of New England.

For the New England Farmer.

ABOUT KEEPING GOATS.

Many persons who cannot conveniently keep a cow would find it profitable to keep one or two common goats. They require but little care, may be supported at small cost, and yield a good supply of milk of superior quality. A goat, well kept, will yield from three pints to two quarts of milk daily, for a large part of the year, the quantity diminishing in the cold weather as the time of kidding approaches. It is much cheaper to keep a goat in town than to pay a milkman, and families everywhere will find the milk very nutritive and wholesome, and especially good for children in most cases. An English writer estimates that two goats are equal to a small Shetland cow.

Goats may be very cheaply supported. If picketted in a pasture in warm weather, or allowed to be at large, they will pick up their own living, eating readily almost every sort of green thing. Grass, weeds, twigs of bushes, vegetables, fruits, nearly everything that grows, will suit their taste. They are fond of dry leaves, corn-stalks, horse-chestnuts, and even eat poisonous plants with impunity. If confined in a yard, or in closer quarters, they will take the scraps and waste of the kitchen. Some persons allow them to feed out of the swill-pail, but this practice cannot be commended. Cobbett says, in his "Cottage Economy:—

"When I was in the army, in New Brunswick, where, be it observed, the snow lies on the ground seven months in the year, there were many goats that belonged to the regiment, and that went about with it on shipboard and everywhere else. Some of them had gone through nearly the whole of the American war. We never fed them. In summer they picked about wherever they could find grass; and in winter, they lived on cabbage-leaves, potato-peelings, and other things flung out of the soldiers' rooms and huts. One of these goats belonged to me, and on an average throughout the year, she gave me more than three half-pints of milk a day. I used to have the kid killed when a few days old; and, for some time, the goat would give nearly, or quite, two quarts of milk a day. She was seldom dry more than three weeks in the year."

The same writer adds, that "goats will pick peelings out of the kennel and eat them. They will eat mouldy bread or biscuit; fusty hay and rotten straw; furze-bushes, heath-thistles and, indeed, what will they not eat, when they will make a hearty meal on paper, brown or white, printed on or not printed on, and give milk all the while?" I may add to Cobbett's list of odd delicacies by stating that my own goats have gnawed smooth the rough sides of my pile of hemlock bark, and have cleaned out all the powder-post from the sills of the wood-shed!

But goats, like most other animals, prefer clean food, and will not devour all the above-mentioned things if a supply of more desirable edibles is at hand. In the winter, it is well to lay in a few hundred pounds of hay—second crop is preferable—a few carrots and some fine feed. Indian meal is sometimes given to them, but it is too drying. They need water occasionally, but do not drink much.

The goat is one of the most hardy of our domestic animals, enduring easily all extremes of

heat and cold. It needs the shelter of a shed or barn in wintry and stormy weather, and will lie anywhere on the floor, preferring a board to a bed. Its natural activity and nimbleness, together with a capricious disposition, fit this creature to enjoy a state of freedom. When roaming wild, on its native mountains, it loves to climb the most dangerous and inaccessible places, clinging on the verge of precipices by its wide-spreading and sharp-edged hoofs, and defying the pursuit of the hunter. This inclination it manifests in domestic life, by scaling sheds, walls, wood-piles, &c., with great agility. But the goat will bear confinement extremely well, continuing in good health and yielding the usual quantity of milk. On shipboard it is healthier than any other domestic animal, and is highly valued on account of its sportiveness, its familiarity, and its ability to give milk upon such waste food as is there obtainable.

The milk of the female goat is sweet, rich and nourishing. It has the body and smoothness of cream, is viscid and strengthening, little productive of oil, but abundant in the matter of cheese. In tea and coffee it is far superior to cows' milk, and will go at least as far again in imparting color and flavor. In all kinds of cooking it is equally excellent. It has no peculiar or unpleasant taste and is not affected by what the creature eats. Onion tops have been given to the females, by way of experiment, without imparting an oniony taste to the milk. I consider two pints of goat's milk to be as good in a family, in every way, as three pints of cows' milk.

For most feeble and sickly children, as well as those in health, it is invaluable. It does not tend to form curds in the stomach, as cows' milk does, and is therefore frequently prescribed by physicians in cases of extreme weakness. It is sold for this purpose in Salem at twenty-five cents a quart. Invalids abroad often resort to the mountainous districts of Ireland and Scotland to derive benefit from the use of this article which is there known as "goats' whey." Mr. Colman noticed that the Irish mountaineers, about the Lake of Killarney, kept from one to thirty goats apiece, for the sake of the tourists to that delightful region. In Spain and Portugal, goats are abundant, and in Lisbon, their milk is more commonly used than that of cows. The goats in those countries are driven into the cities in the morning, and milked at the doors of the houses. The district in France most celebrated for goats is the Canton Mont d'Or, where, in a space not exceeding two leagues (six miles) in diameter, upwards of eleven thousand are kept, chiefly to supply the city of Lyons with cheese. There are several other interesting particulars relating to the goat, which I will give in another paper.

G. L. STREETER.

Salem, Jan., 1862.

EXCHANGE OF SEEDS.—It is a good rule in agriculture, to effect a change of seeds as often as once in every two or three years. Why it is that the seeds of most of our field crops or grains do better when cultivated on lands at a slight remove from those on which they were matured, is a question which science has as yet been unable satisfactorily to solve; but such is the undeniable fact, and indeed is so obvious, and so clearly corrobo-

rated by all experience, as no longer to admit of doubt. The winter and early spring are favorable seasons for exchanging, as well as for procuring new and improved varieties of seeds, plants and scions.

ALPINE SCENERY.

In Switzerland there are thousands of places and objects of interest at every turn, and yet how few of them are seen or even heard of by that vast array of crusaders, who, alpenstock in hand, hunt after the magnificent! I will take one place, for example. Lying high back from the Lake of Thun, is the Justis-Thal, a narrow valley of singular grandeur and wildness. On either side, walls of rock tower perpendicularly two or three thousand feet; a gushing stream pours with giddy roar through its very heart; a straggling *chalet* may be met with here and there at long intervals; whilst huge boulders, torn by the action of time from the mountain-ridges, strew the few grassy spots in what it seems paradoxical to call a plain, and which afford scanty pasture to a drowsy flock of goats and cows.

But the most remarkable phenomenon of this scarred valley is the *Schafloch*, a huge ice-cavern, bored, as it were, in the solid rock, nine hundred feet above the level of the valley, apparently inaccessible to human approach. Neither the peasants of the village, nor the mountaineers, could give any account of the interior. The oldest inhabitant did believe that some bold adventurer in his younger days had reached it, but it was a dangerous enterprise, forsooth, and even that exploit had faded into tradition. Fortunately, on the outskirts of the town of Thun—it might have been at Hilterfingen, whose pretty church, on a beechen knoll, overlooks the bright waters of the lake—there dwelt, I heard, a middle-aged man, who had really once visited the cavern, but that was many summers ago, and who even boasted that his memory of the track still served him well enough to reach it once more. He would venture to act as guide, he said, should I or my friends like to explore that isolated region. "I will leave my wife and children in pledge with the syndic," he added, "if I don't bring you back again safe."

We wound slowly up out of the village by a zigzag pathway, at first broad enough for a horse to traverse. At last, after a four hours' ascent, we wended our way through what seemed to be a natural gate-way of the mountain, and suddenly confronted the valley of the Justis-Thal. A new scene now opened before us. A small plateau lay at our feet, which presented a scene of desolation it would be as difficult to forget as it would be to describe. In addition to the mighty boulders which seemed scattered about by the hands of giants, or the sons of Anak, struggling in an angry mood, it was evident that the spot had once been a forest. Some pines, towering a hundred feet, still stood erect; others had been snapped off midway, and their lofty heads dropped downward to the earth; others, again, lay prone on the ground, singly, or huddled together like corpses on a battle-field. But the most extraordinary phenomenon was their trunks and branches, which had been literally stripped of their bark. Some were black, as though scarred by lightning; others were already converted into the softest touchwood, which

crumbled into dust on the least handling. Everywhere the melancholy signs of decay and desolation presented themselves; and it required no stretch of the fancy to make us imagine we had reached the outskirts of nature.

At this point, the *Schafloch* was in full view, a mile or more in front of us; but how was it to be reached? There was no beaten track; the rock was almost perpendicular; the surface crumbled beneath our feet at every step, and the slightest mishap would precipitate us a thousand feet into the valley beneath. We embarked upon the crumbling *debris*, the dust of ages, and sank at once deeper than our ankles in the stony detritus. At every step, a mass of this uncomfortable and unstable *terrain* was set in motion, and it was scarcely possible to prevent ourselves moving downward with it. Occasionally the force of this sliding mass would communicate a locomotive impetus to a huge boulder, when might be heard a sound of something leaping and dashing from point to point, crashing through brakes and bramble, or the branches of trees, and at length plunging, with a voice of thunder, into some cryptic chasm, there to rest till doomsday. I had, however, learned to walk the mountain side; and notwithstanding the almost insurmountable difficulties of the track we had to traverse, I contrived, by the use of the alpenstock, which served as a kind of Blondin's balancing-pole, as well as the exercise of a nervous caution, to reach the entrance of the cavern.

It might be thirty feet high by forty wide, the roof rising internally, like a domed vault, until another twenty feet was added to the height. The threshold for fifty feet or so was strewn with the rough pavement of splintered rock, the sharp edges of which cut like the blade of a knife; or huge boulders, so smooth and slippery with perennial damp, that it was almost impossible to scramble over them; or, perhaps, a huge quadrangular slab, polished as a glass mirror, on a gradient of fifteen or twenty degrees, invited the foot only to betray. Not many feet beyond us, blazed innumerable stars, which glistened like spangles or diamonds in the ebony horizon.

From the roof the water had evidently oozed down from time immemorial. Its fall, however, had been arrested by an icy hand, even at the roof; as fresh streams from the rock above penetrated through, and trickled over the congealed surface, icicles grew and grew till they reached the ground, but instead of falling perpendicularly to the floor, they formed outward and bent inward. Interlacing these props, as it were, of a structure built from the top, frozen bands or branches, which intersected each other, created the most perfect trellis-work, or, more properly speaking, the most delicate filigree-work. The result was a scene of real enchantment, and I seemed transported, as in a dream, into the midst of an Eastern paradise. Kiosks, with innumerable minarets, or pavilions, or painted pagodas, or what you will, rose before me, vanishing away in the distance, all of the purest crystal. My guide likened the view to a pine grove clad in snow; but the illustration was feeble. It might have been better to have described it as a Gothic cathedral, the pillars in the nave being constructed of glass, and lit up from the interior; but even this similitude is faint and imperfect.—*Temple Bar.*

For the New England Farmer.

WEATHER AND CROPS IN VERMONT.

Snow in January—No Real "Hard Times"—Excellence of the Barley Crop—Fine Fat Hogs—Description of a Sheep Barn Expected.

MR. EDITOR:—Having a few leisure moments this stormy Saturday evening, I think I can do no better than to have a short chat with my brother farmers through the medium of what is emphatically the "*New England Farmer*."

Up to about the middle of January there was hardly snow enough to make it good getting around in the woods, but now, like a railroad train behind time, it is putting in some of its best strides—having snowed seven of the last eleven days—and this winter will certainly be an exception if it does not make up all lost time before the middle of April.

Our farmers, I think, have as little cause for complaint in regard to the "hard times" as any class of people, for most of us, at least, have enough to eat, if it does take a bushel of oats to buy a yard of cotton cloth; corn plenty, oats plenty, potatoes plenty, wheat we don't mention in this vicinity, and a good yield of barley with those who sow it. And, by the way, I think this is a grain altogether too much neglected, in this section, at least, for the interest of the farmer.

Speaking of barley puts me in mind of some hogs killed last month by Mr. R. W. Toby, of this town, that were fattened on barley. They were slaughtered when 18 months and 18 days old. Were three in number, and weighed, when dressed, 636, 523 and 486 pounds. These hogs had no extra keeping; their feed the first summer being milk, and through the winter two pailfuls of raw potatoes per day. The potatoes were cut fine, about a quart of meal to the pailful put on top of them, and then boiling water sufficient to scald the meal poured on. Last summer they had nothing but milk, until the milk began to fail, after which they had barley meal.

Mr. Toby says he had rather have a bushel of barley than a bushel of corn, to feed hogs. A year ago last fall he butchered two pigs the day they were 9 months old, one of which weighed 358 and the other 337 lbs. I think you must acknowledge that he is "some" on pork, barley or no barley.

If I had time, I would like to give you a description of Mr. Toby's sheep barn. It is so arranged that each sheep is by himself; there is no crowding, no treading on the fodder, each sheep gets his own grain and no more. The arrangement is by no means expensive. Should you think it acceptable, I will at some future time send you a description of it.

JAKE BOMSTY.

Calais, Vt., Jan. 25, 1862.

REMARKS.—Please send us the description you speak of. You may see an inquiry in another article for the plan of a sheep-barn.

PEAS WITH POTATOES.—A letter in the *Agricultural Gazette*, an English paper, states that a single pea inserted into each piece of potato that is planted, will produce a large crop of peas, and tend to check disease in the potato. It is a practice with some to plant peas with potatoes, here. The potato stems answer a good purpose for the pea vines to run upon.

LEGISLATIVE AGRICULTURAL SOCIETY.

REPORTED FOR THE FARMER BY D. W. LOTHROP.

The fifth meeting of the series was held on Monday evening last, at the Representatives' Hall, when the topic for discussion was that of the previous meeting—*Neat Stock—the adaptation of different Breeds to different localities and purposes*. Mr. STEDMAN, of Chicopee, one of the House Committee on Agriculture, presided.

The chairman, in making a few introductory remarks, said he did not advocate any one breed of cattle, as a general thing. Undoubtedly, our stock is susceptible of great improvement, but we need light to guide us in its amelioration. He alluded to the number and value of cattle in our State, and the great increase of value by judicious breeding; and he thought the true rule was to breed from the best males and females, without relying much upon grade stock. Mr. S. read from the old *New England Farmer* matters in point, of different importers of cattle, and the good influence their blood had upon our stock. He cited the "Chapin oxen," one of which, when slaughtered, weighed 1993 pounds. But beef is not the prime object of our farmers; the products of the dairy should not be overlooked. He alluded to some grade Short-Horns of Gov. Lincoln, of Worcester, and observed that they had fulfilled their expectations, as they were good for the dairy and the stall. This particular crossing, too, Mr. Fessenden had advocated. The speaker much deprecated grade bulls, and observed that their calves would resemble both the sire and the dam, but would be more of the bull. He opposed the offering of premiums for such bulls, and mentioned the Plymouth Agricultural Society, which had offered more for grade than for blood bulls; and the Worcester Society had offered the sum of \$24 for the same. To show the superior influence of the male, Mr. S. cited a case where Gorham Parsons, of Brighton, had crossed the Angora goat with the common female, and a long-haired progeny was the result. He also alluded to the influence of the first impregnation of a cow upon all her future offspring; and hence the pernicious influence of scrub bulls. He did not generally favor Lynch law, but if Judge Lynch wanted subjects for execution, he thought these bulls the thing.

Dr. LORING, of Salem, being called upon, said he endorsed all that had been said in regard to the introduction of male stock, and inquired what is the most profitable breed of neat cattle for the farmers of Massachusetts. He was sensible of the good effect of blood bulls, but farmers had much neglected to supply themselves with them. He alluded to the valuable stock in the Connecticut Valley, introduced by Mr. Williams. They were grade Durhams, and were fitted for that place; in fact, they had done as well as in England. This

stock, introduced in Essex county by Messrs. Parsons, Gore and Derby, showed a tendency to degenerate from an insufficiency of grass, and the speaker thought that the county, in this respect, was now about where it was then. Different localities require different breeds, yet we have no precise law upon the subject. Animals are influenced by climate; those of the valley of the Tees, in Scotland, are not fitted for the mountains. But what is the animal we need? In England, they require high-fattening and quick-growing herds for profit. We need a variety yielding milk, beef and labor. Dr. L. questioned the utility of animals of large carcass, with no muscular development. Because they eat well, some have thought them good for the dairy. But we should study economy in the selection of stock, and he thought the Short-Horn mixed with our native stock was an instance of it. Dr. L. also spoke of the old yellow stock of New England, introduced by our forefathers, and said it was regarded as good for milk, labor and beef. But he seemed to think that our farmers need a hardy breed, fitted to yield good milk, and in Essex, where feed is not abundant, he suggested the propriety of introducing a smaller class of cows. For beef and labor, he admitted the value of the Devons, but said we wanted special milkers, and alluded to the valuable dairy herd on the hills of Scotland—a breed not excelled. He asked why the Devons had not thriven here? The cause may be in the climate, soil or feeding. But the Herefords, too, he thought had degenerated; yet better feed would probably keep up the good character of both. He spoke highly of the Ayrshires, and recommended their introduction for dairy purposes.

Mr. WETHERELL, of Boston, being called upon, spoke of the skill required to keep up the good points of artificial breeds. Natural breeds do not degenerate. There is great vigor in their bulls (the buffalo, for instance,) and he advocated in breeding the importance of procuring the most vigorous males. Some of our bulls were not worth castrating for workers. The seminal product in all things was the best and most enduring in its influence when full, fair and vigorous, no less in the animal creation than in the vegetable; and in this connection Mr. W. cited the acorn, with some other seeds, and said the titman in pigs was always the smallest. We should breed only from the best and most vigorous animals, and the sire or dam should be of full blood. The speaker also inquired whether the dairy was the leading interest among farmers. Some in Hampshire county had fed for beef, and thought they could make from \$18 to \$20 more on an animal than from the dairy. In the purchase of animals, some could not discriminate and were cheated, while others possessed the art of "handling," and were less deceived. Mr. W.

also spoke of the difference between a *breed* and a *race* of cattle. The Devons and Herefords preserve their identity, but the Short-Horns are a cross, and need reproduction for their preservation. If Devons and Short-Horns are fifty years in different pastures, the Short-Horns will have the less marked character. The tendency of the latter is to run back or run out. Thus the difference between a breed and a race. The Short-Horns were regarded as good for beef, but in England the Devon beef would bring a cent a pound more; and the Hereford beef also took a high rank. In speaking generally of the flesh of the ox, he alluded to the beef in the valley of the Connecticut, and said that no where had he ever eaten any so tough! [Mr. Stedman responded, "We have sent away our best breeds!"]

Mr. LEWIS, of Framingham, spoke of premiums offered for grade bulls. He believed in going ahead, not downwards; and thought it better to breed from the grade than the native, but should not even do so where he could get the best blood bull. But these animals are not always at hand, and he intimated that the best and handsomest grades should be encouraged. The cattle disease, too, had made some farmers rather shy of foreign stock. He spoke of the first impregnation, and said it was the impregnation of the blood. He would drive a heifer to a blood bull first, and afterwards to grades, if necessary. Mr. L. alluded to the production of different colors in calves, and to Mr. Jacques's assertion of his power to accomplish it. Dogs sometimes are in circumstances to affect the color of the cow's offspring. Bulls, he thought, at no distant day, would be licensed. He mentioned an instance where a gentleman drove a native cow to a Short-Horn bull, and the progeny would bring \$300. Speaking of the confusion in breeding, and the varied ideas of neat cattle, he said he would give \$1000 to any one who would tell him how to stock his farm! Ohio had expended \$10,000 for bulls, and he hoped that in every town in our State there would yet be a good bull kept. In conclusion, he said he wanted our foreign cattle quarantined.

Mr. HOWARD, of the *Boston Cultivator*, spoke of the importation of cattle, and said that no disease had been introduced except in the case of Mr. Chenery. He spoke of the adaptation of breeds to localities. The cattle introduced by Mr. Williams, were first placed on his farm in Northfield, of this State. But they were not adapted to that locality, and Mr. Lathrop, of South Hadley, took them to the valley of the Connecticut. Some of this stock was introduced into Essex county, and placed on the Derby farm for milk; but he could now see no blood of this breed. Mr. H. alluded to grade animals, and to the bull "Red Comet," and cited the mixture of his blood. This ani-

mal he praised, and said that when animals were promising they should be kept to try. We should have some rule, and where a stock of value is introduced, we should take care of it.

Mr. STEDMAN said the Phoenix bull was different from the Red Comet. We should breed even from the best grades, if we cannot get good blood bulls. He suggested that the color of the Devons might have been spotted.

Mr. LEWIS cited an instance in Mr. Buckminster's speckled steers, though they were not full blooded. He also spoke of some means by which cattle might be changed or modified in color. He related, too, a fact of a farmer having a white bull who passed by and down a street by his neighbors, when some of their cows had white calves! He also observed that he could breed a speckled calf, whatever the color of the bull.

Hon. JOSIAH QUINCY, Jr., being called upon, spoke of bad bulls, and thought it an indignity to any respectable cow to be compelled to come in contact with them. In regard, however, to breeds generally, he thought that for milch cows the secret of success was more in high feeding than in the breed; and he would venture to repeat that in regard to milk, manure or beef, you can get nothing out of a cow that you do not put into her. He had 90 cows, and could increase their milk daily from 100 to 200 quarts by feeding. A cow is as much a machine as a mill; the more you put in, the more you will get out. He thought crossing made the best cattle, and our native stock was the best as a basis. The intermixture of Scotch, Germans and Irish into our society had made us more robust, and produced our nation as it is. Mr. Q. spoke of Jacob, of Bible history, his skill in breeding; of the good beef of England, &c., of his visit to a cattle fair in Paris, where there was much contrariety of opinion as to what were the most profitable breeds of cattle. And so as to pigs; the question was about the pig that wanted somebody to take care of him, or the one that would take care of himself. To a question put to Mr. Quincy in regard to breeds, he said that he thought that the good qualities of cattle were more in individual animals than in breeds. He inquired of Dr. Loring if there was not a great difference in cattle of the same breed.

Dr. LORING replied, yes; but it was the elevation of the average that gave the breed its character.

Mr. CLARKE inquired of Mr. Quincy, if his experience had been large and well tested in regard to his views of no great difference in breeds.

Mr. QUINCY said it had not been. To a question in regard to feeding, Mr. Q. said he used two tons a week of cotton-seed meal, and the manure it produced was worth about as much as the meal itself. He also feeds some Indian meal.

The hour for closing having arrived, the chairman announced the topic for the next discussion, which will be, *Farm Buildings*. Adjourned.

Correction.—In the remarks of Mr. Howard of last week, where the South Devons are spoken of as not superior for dairy purposes, it should have been *North Devons*. And in regard to the milk of the Kerries of Mr. Austin, the quantity should be from 12 to 14 quarts per day.

For the New England Farmer.

RETROSPECTIVE NOTES.

A NEW ERA FOR CHILDREN.—The communication of Mr. Bacon, with the above caption, printed in the *Farmer*, weekly, of Nov. 30th, and in the January No. of the monthly, is deserving of the attention of all the readers of this paper who are interested in the education of children, and who wish to see them instructed in all that concerns the science and practice of soil culture. We have examined portions of the "*School and Family Readers*," got up by Marcus Willson, and published by Messrs. Harper, of New York, and the result of our examination was a persuasion that every progress-loving parent, who should make himself acquainted with these works, would form a resolution that they should be introduced into the schools of the district. He would resolve, also, we felt persuaded, that they should be used in his own family, to give his children the means of becoming acquainted with the works of the great and beneficent Creator and Contriver, and with the more interesting and useful productions of the world in which they are to live.

As to the other work—Emerson & Flint's Manual of Agriculture—by the publication of which "our young friends are blessed," as Mr. Bacon says, I have not yet found time to do more than glance at it; but am persuaded, from sundry notices of it which have appeared in reliable journals, that it will be found an excellent book in a farmer's family, if the father is intelligent enough to use it as a text-book, and devote these winter evenings, or other leisure time, to the hearing of recitations by his children, and to endeavors to increase its interest and instructiveness by apt and familiar illustrations and remarks from his own experience. While the older boy or boys are reciting and listening to their father's illustrations and remarks, the younger children will catch now and then an important item of information, and pretty certainly, also, a portion of that enthusiasm with which an intelligent farmer is likely to be inspired while thus engaged as the instructor of the older boy or boys.

Of its value in schools, experience will soon be able to give the most reliable testimony; but, as in the case of its use in the family, so too in schools, much will depend upon the intelligence, the tact, the inspiration or enthusiasm of the teacher. We hope it will be found well adapted to interest children as a school text-book, for if children become interested in the study of it, they will remain interested in after life, and thus we shall have hereafter more *mind* in our life-pursuit, and the business of farming more dignified, attractive and respected.

PREPARATION OF BONES FOR USE.—Of all the methods for preparing bones for the use of the farmer, this, which is described by Mr. Grennell, of Greenfield, in the *Country Gentleman*, and copied therefrom into this paper of Dec. 7th, and into the January No., at page 23, seems to be the best in several respects. The treatment with sulphuric acid is expensive and dangerous, and requires, moreover, the previous breaking down or grinding of the bones. The fermentation of bones, which was noticed in this journal last year, (see the weekly of Aug. 10th, or the September No. of the monthly,) under the head of "Dissolving Bones," though comparatively simple, cheap and easy, is not so much so as Mr. Grennell's process, and requires the breaking or crushing of the bones, which Mr. G.'s does not. He takes the bones as he finds them, and packs *without* crushing them. This is one of the points, perhaps the most important one, in which Mr. G.'s method of preparing bones for use is superior to all others: *There is no part of the process that can present any difficulty to any farmer.* For the majority of farmers this will undoubtedly prove the method which will be preferred to all others; and so simple and easy is it that hereafter there can be no excuse for those who neglect to pick up, and collect, and prepare for use all the bones about their premises. A barrel of bones thus prepared will be worth a quarter of a ton of *some* superphosphates.

As Mr. Grennell, in reply to a Canadian farmer who inquired through the *Country Gentleman*, as to the state in which the bones are found after being packed a year, and as to their applicability for turnip-manuring, has added a few items of information to those in the article under notice, we will here give an abstract of such as may be useful to those about to try Mr. G.'s method.

In *Country Gentleman* of Jan. 2, Mr. G. states that he finds the bones at the end of a year in every state of decay—that knuckles and shank-bones are occasionally slow to yield—that he commonly takes the undigested and throws them into a barrel for the next year, and that, as he uses the bones chiefly for grape borders and manuring pear and apple trees, it matters little about the fineness to which they are reduced. The ashes should be of hard wood, and fresh.

MORE ANON.

MIDDLESEX AGRICULTURAL SOCIETY.

We have before us the *Transactions of the Middlesex Agricultural Society* for the year 1861, with a List of Premiums for the Exhibition in 1862. It is printed in a very handsome manner, by BENJAMIN TOLMAN, Concord, and comprises 114 pages. After a brief statement of the Exhibition, the first paper it contains is the Address of Ex-Gov. WASHBURN, the subject of which is—"The Connection between the Social and Political Condition of a People, and the Mode of Holding and Cultivating their Lands." We had the pleasure of listening to this Address on the day of Exhibition, and found much in it to interest and instruct.

The pamphlet contains several very good reports,—a branch in which most of our County

transactions are deficient—viz.: One on *Roadsters*, by J. Cummings, Jr., of Woburn; one on *Milch Heifers*, by Winslow Wellington, of Lexington; one on *Poultry*, by E. Wood, of Concord; one on *Bread*, by Minot Pratt, of Concord; one on *Apples*, Class 1, by Samuel H. Pierce, of Lincoln; on *Apples*, Class 2, by Andrew Wellington, of Lexington; on *Peaches* and *Plums*, by E. H. Warren, of Chelmsford; one on *Grapes, Fruit* and *Melons*, by John B. Moore, of Concord; on the process of *Wine-Making*, by E. W. Bull, of Concord; on *Vegetables*, by James Gammell, of Lexington; on *Household Manufactures*, by Lilley Eaton, of South Reading; on *Flowers*, by E. W. Bull, of Concord; on *Bulls and Blood Stock*, by Peter Lawson, of Lowell. These reports are somewhat extended, and state valuable facts, or make interesting suggestions, which give the Transactions a value which they could not possess without them. The names of the officers for 1862 we have given heretofore.

For the New England Farmer.

THE USES OF LABOR TO MAN.

MR. EDITOR:—Man's nature is such as to fit him for the world which he inhabits. He was created in the image of his Maker—that is, God endowed him with mental faculties similar to his own, only that they were infinitely lower in the degree of their development. These higher powers, with his peculiar physical organization, distinguish man from the lower animals, placing him but "little lower than the angels, crowning him with glory and honor," and giving him dominion over the whole earth and sea, and all living things that inhabit them.

Man's physical organization is such, constructed with its limbs, its bones and muscles, cords and sinews, as to make it capable, under, and with the mental powers which guide and direct it, of obtaining all needed supplies for its sustenance and comfort. But, high as is the position which man occupies in the scale of being, labor is to him a necessity. Without it, in both departments of his two-fold nature, the effects of that immutable law are felt, according to which each faculty, not used, degenerates and wastes away like the share of the rusting plow. God, in His all-wise providence, has fitted the earth for man's peculiar nature. The riches it contains are not called forth simply at his bidding. He is compelled to call into action the exercise of all his faculties and susceptibilities, to obtain the necessities of his life, and this exercise not only preserves, but strengthens and develops them. Use is the parent of development. Thus it is evident that the necessity which compels us to labor, is the result of one of the most benevolent of laws. Labor was a necessity before, as well as after the fall of our first parents, who in the beginning tilled and dressed the garden; therefore the poet mistakes in speaking of labor as the "primal curse softened to a blessing." Our first parents were removed from the garden, but outside of it, they could form and cultivate another, and while earning their food by the sweat

of their brow, increase the health and strength of body and mind.

Our food is composed of elements which repose in earth's bosom, or float in the air and sea. Each seed is qualified to draw into its form the elements which its nature requires to start the germ and form the plant, and grow, develop, and mature. And at last the sun and air ripen it, and fit it for our use.

But all the time we must obey the laws of production which govern the growth of the plant, by placing it in the right soil, in a proper manner, and removing whatever obstacles may obstruct its growth. It might naturally be supposed that the less labor we were compelled to perform, and the more leisure hours we could gain, the greater would be our mental acquisitions. But as we look over the world and see a rough region like New England, where severe and protracted labor is necessary, standing in an intellectual point of view, pre-eminent among the people of the earth, and regions where a tropical sun and fertile soil remove the necessity of labor such as we perform, among the lowest mentally, that theory is disproved.

The labor doom of "honest poverty" should not be scorned. Poverty has compelled many of the mightiest intellects to develop those powers which would otherwise have lain inert. Many of the mightiest minds sprang into being in the home of poverty. Washington, though the son of wealthy parents, surveyed in his youth among the forests of Virginia. Webster was the son of a New Hampshire farmer, and labored with his father, in his childhood and youth. Burns, the plow-boy poet, first drew breath beneath a straw-thatched cottage in Scotland, and his

"A man's a man for all that,"

was composed in consequence of sneers at his toil-hardened hands, the scorners themselves, with their delicate fingers, never having performed that physical labor which disciplined and energized the mind, and gave force to the character of Burns. Elihu Burritt, "the learned blacksmith," Hugh Miller, the geologist, and thousands of other examples, might be cited to prove poverty and severe protracted labor to have been of great value in bringing out the latent energies of many of the leading minds, both of present and past ages.

But one great fact should be kept in view by the child of wealth, and that is, riches, if properly used, are a blessing. Washington, though wealthy, labored, and so can you. And by such labor, with only common talents, you can rise to such a position as to illustrate the truth of the proposition, that "those possessions which are, when abused, man's greatest curse, are, when properly used, his greatest blessing."

Jan., 1862.

A MONTHLY READER.

TENACITY OF LIFE IN A FISH.

It is not unusual for the dealers in fishes for aquaria to find that some of them, the gold and silver carp especially, have leaped out of the water, and lie partially shrivelled up on the floor. They return them to the water, and they resuscitate, without apparently having suffered injury. We have known fish to be frozen in the aquarium for hours, and be as healthy and lively as ever when gradually thawed out. But a most remark-

able instance of tenacity of life in a fish out of its "natural element," occurred under our own observation a few days ago. A salt water aquarium had to be removed some distance, and the animals and plants, with a full supply of water, were put into a large zinc pail for conveyance. Among the animals was a sole, a fish which has the habit of clinging to the sides of the aquarium or any other perpendicular object. Following this habit, it was left adhering to the side of the pail when its contents were emptied into the aquarium. It remained there, without any water, for four days and nights. When found, it was still living, was returned to the aquarium, and for a fortnight has continued apparently healthy. We have not read of an instance of such tenacity of life in a fish out of its element.—*N. Y. Commercial Advertiser.*

WHAT IS ENGLAND DOING?

We are bound, in common civility, to take some interest in the affairs of foreign nations, seeing how tenderly solicitous they all are about ours. Indeed, it is not without some grains of satisfaction and complacency that we observe, in reading the foreign journals, how large an influence our conduct has upon the rest of the world. Just now, it is quite evident that all England, at least, is drawing a long breath of relief at her sudden extrication from danger of war with America. John Bull is very full of what he calls "pluck," and he really meant war, when he politely suggested the propriety of our releasing Mason and Slidell; that is to say, the British government had found an occasion to interfere with our affairs, in which their people would have supported them. The *people* of England do not want war with us. Their sympathies are with us, as they always are with freedom, and law and right. But the aristocracy are not our friends. They are jealous of our power, and of our republican institutions, and would gladly see us divided into several rival nations, instead of composing one grand and overshadowing power.

And now that Mr. Seward, so honorably and so adroitly, has avoided the threatened conflict, the people of Great Britain are really glad, and the government is obliged to pretend to be so. The English are a fair-minded people, and pride themselves on always doing the manly thing. We cannot help thinking that such a people, on the whole, must be a little ashamed of so violent and manifest an attempt of their government to make trouble with us, just while we were engaged in a pretty severe scene of family discipline. As the poet says:

"It don't seem hardly right, John,
When both my hands were full,
To stomp me to a fight John,
Your cousin too, John Bull."

Everybody, everywhere, sees that, had we been at leisure to give our undivided attention to John just at that time, he would have been somewhat

more polite, and a trifle less peremptory in his demands for satisfaction. But we are farmers, and our business is with corn and wheat, more than with great guns, yet it is surprising to see how much the actual fighting condition of the nation depends on its present supply of grain.

The old saying that "one cannot afford to quarrel with his bread and butter," applies with equal force to nations and individuals. The great obstacle to the forward movement of our vast armies is, not that we have not men and guns enough to march at once straight down to the Gulf of Mexico, but that we cannot transport supplies to feed the army in a rapid march.

England has ships and soldiers enough to have troubled us sorely, had she pounced suddenly upon us while we were in this death-grapple with rebellion; but her own journals clearly show, that she must have had a famine at hand next spring, such as she never felt before, had we accepted the war she proffered us.

SCARCITY OF GRAIN IN EUROPE.

The *Mark Lane Express* of January 20th contains estimates by correspondents, not controverted by the editors, which indicate so enormous a deficiency in the wheat crop, that it would seem that America, with her best endeavors, could hardly supply the demand, and it is quite certain, that had her trade been cut off by a war, the cry for food in the large towns of Great Britain would have been so loud as to have drowned all complaints for want of cotton. The estimate is as follows. We hope our readers will take the trouble to understand it.

	<i>Bushe's.</i>
The regular crop of wheat in Great Britain and Ireland is.....	164,000,000
Short planted for last crop 1 $\frac{1}{2}$	40,000,000
Short yield of that sown.....	20,000,000
Quantity shed by being over-ripe.....	8,000,000
Extra quantity taken for seed for crop of 1862.....	6,000,000
Exported to France from August to December, 1861.....	8,000,000 — 82,000,000
	82,000,000
To which add the usual importation.....	40,000,000
Making the requirements.....	122,000,000

It is admitted that France will want in all, for the year, 80,000,000 bushels, and probably more, because the chestnut crop, which usually feeds two millions of people in France, failed last season, while Italy, Spain, Portugal and Belgium had all of them bad harvests.

It is estimated that since September 1, 1861, there have been imported into Great Britain and Ireland 19,200,000 bushels of wheat and flour, turning the flour into grain, against 32,800,000 for the corresponding period in 1860, and that France, up to January 20, had imported but little more than one-third of her necessary supply. The granaries of Great Britain were probably never so empty at this season of the year, as now. Yet the

price of wheat in London is not very high, being about \$1.90 per bushel, just about the same as it was in January, 1847, the year of the Irish famine! and yet before the first of June that year the price had advanced to \$3.20 per bushel! and through the famine that ensued, and its consequences, nearly two millions of the Irish population were swept from her naturally fertile soil!

It is difficult to see how the wants of England and France are to be supplied. We exported, in 1847, nearly \$69,000,000 worth of breadstuffs, and in 1854, nearly \$66,000,000. There is a vast surplus now on our hands, but it is not at the seacoast, nor can it be until navigation opens, and it is a question for the old countries who need it, to solve, how their supply is to be obtained.

We may well feel proud that with our vast army operations in hand we have enough and to spare, for those whose policy toward us is such that we can maintain the friendly relations of commerce.

AGRICULTURAL STATISTICS.

Nothing strikes an American in England so forcibly and constantly as the spirit of conservatism. In our country, it is a pretty good reason for changing an idea, that it is an old one, and because, in the nature of things, there should be some improvement, some progress. In England, on the contrary, what has been must be. That a horse-railway should go through a street in London seems impossible to an Englishman, simply because there never was one there, while every American sees that street-railways are just what every great city needs. England has no system of obtaining agricultural statistics, and nobody knows, except by guess, how many cattle or sheep are in the country, or the product per acre of her crops. Constantly there are movements to induce the government to institute measures for obtaining this essential information, in some reliable manner. Why is it not done? Ask a farmer the question, and he inquires "What good will it do?" One reason why the farmers oppose it is this: They occupy their land under leases, usually not written, and not for any definite term, yet they remain from year to year, and are really more permanent in their homes than New Englanders who can own their farms, but sell and exchange them as readily as their horses, and who, in fact, rather enjoy a change of locality once in a few years. Now, the English farmers all fancy that if their landlords really knew how much profit they were making, their rents would be raised. Besides that, they are watched enough already, especially where game is preserved, and where a game-keeper is prowling about their farms night and day, to prevent the boys from catching a hare or a partridge on the farms where they were born. A recent proposition that the police officers should be em-

ployed to collect agricultural statistics, was met with a general burst of indignation by the farmers, and there really seems to be no prospect that any movement in this direction will be made. The estimates which are given above are derived from observations by dealers and others about the markets, and from custom house records and the like. Very accurate statistics were obtained for a few years throughout Scotland, by one of the agricultural societies, but that is understood to be given up.

There is the same jealousy in England, in the matter of general education, many good men believing that it would be of no advantage to the laboring classes to be educated. Perhaps that is true, if those laborers are to have no opportunity to improve their condition.

We are inclined to think that the slave-holder is right in keeping his slave in ignorance, if he intends he shall remain a slave, and the same reasoning applies to any mere man-machine. Yet, there is a better spirit than this abroad in England. The late Prince Consort, who seems never to have been appreciated in England till his death, was a warm advocate of education for the laboring classes. He was, moreover, a lover of agriculture, and an active advocate of progress, and just before his death, had accepted the position of President of the Royal Agricultural Society of England. He was no doubt, too, a friend to America, and remembered gratefully her kind reception of his eldest son. We may, as agriculturists and philanthropists, join in regrets that his life so suddenly closed, and may offer our sincere sympathy to Her Majesty in the loss of her nearest earthly friend, who was indeed a friend of the poor and the oppressed, and of progress everywhere, rather than of the statesmen and nobles of the land, who were too jealous of his growing influence with the people, to accord to him in his life, the praises in which they now so zealously unite.

AN ESQUIMAUX RIFLEMAN.—As we were in the open country, and there was no tangible object to shoot at, he made a circle in the snow of about two feet in diameter, then, stepping in the centre, raised his gun perpendicular from the shoulder, and fired in the air. After firing he stepped out of the ring, and in a few seconds, to my astonishment, the bullet came down within the circle he had made. He coolly remarked, "we want no targets to fire at;" and if a man can hold his musket with that precision as to cause the ball to return just where he stands, what need has he of a butt? But the principal reason why they thus test their shooting is an economic one. Not always being able to get bullets, they are chary of firing them away, and I have no doubt it is for the same reason that so many savage people have the "boomerang," or return missile.—*Recollections of Labrador Life by Lambert De Boilieu.*

DANA'S TRANSPARENT WHITE CURRANT.

DRAWN AND ENGRAVED EXPRESSLY FOR THE N. E. FARMER.

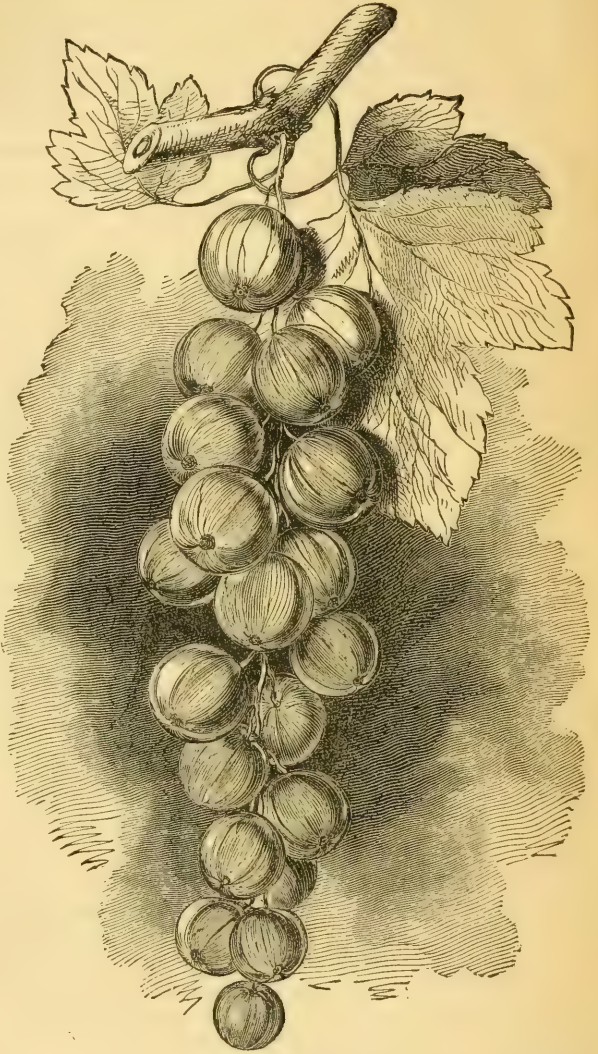
Among the most successful cultivators of garden fruits is Mr. Francis Dana, of Roxbury. He has originated several pears of the best quality, and two or three currants which promise to rank equal to any of the new foreign varieties. The accompanying illustration shows one of these, to which Mr. Dana has given the above name.

The bunch from which the drawing was made was furnished us last August by Mr. J. W. Foster, of Harrison Square, and is only a fair representation of the berry and cluster. The flavor of this currant is excellent, size very large color more transparent than the White Dutch, and the berries do not appear to fall from the end of the bunch before ripe.

The currant is one of the hardiest of the smaller fruits. It is very easily propagated, will grow with but little care, and under any ordinary cultivation, will return a large crop every year.

THE SNOW.

The snow was proverbially called the "poor farmer's manure" before scientific analysis had shown that it contained a larger per centage of ammonia than rain. The snow serves as a protecting mantle to the tender herbage and the roots of all plants against the fierce blasts and cold of winter. An examination of snow in Siberia showed that when the temperature of the air was seventy-two degrees below zero, the temperature of the snow a little below the surface was twenty-nine degrees above zero, over one hundred degrees difference. The snow keeps the earth just below its surface in a condition to take on chemical changes which would not happen if the earth were bare and frozen to a great depth. The snow prevents exhalations from the earth, and is a powerful absorbent, retaining and returning to the earth gases arising from vegetable and animal decomposition. The snow, though it falls heavily at the door of the poor, and brings death and starvation to the fowls of the air and beasts of the field, is yet of incalculable benefit in a climate like ours, and especially at this time, when the deep springs of the earth were failing and the mill streams were refusing their motive powers to the craving appetites of man. If, during the last month, the clouds had dropped rain instead of snow, we might have pumped and bored the earth in vain for water; but, with a foot of snow upon the earth and many feet upon the



mountains, the hum of the mill-stones and the harsh notes of the saw will soon and long testify to its beneficence. Bridges, earth-works, and the fruits of engineering skill and toil may be swept away, but man will still rejoice in the general good and adore the benevolence of Him who orders all things aright. The snow is a great purifier of the atmosphere. The absorbent power of capillary action of snow is like that of a sponge or charcoal. Immediately after snow has fallen, melt it in a clean vessel and taste it, and you will find immediate evidences of its impurity. Try some a day or two old, and it becomes nauseous, especially in cities. Snow water makes the mouth harsh and dry. It has the same effect upon the skin, and upon the hands and feet produces the painful malady of chilblains. The following easy experiment illustrates beautifully the absorbent property of snow: Take a lump of snow (a piece of snow

crust answers well) of three or four inches in length, and hold it in the flame of a lamp; not a drop of water will fall from the snow, but the water, as fast as formed, will penetrate or be drawn up into the mass of snow by capillary attraction. It is by virtue of this attraction that the snow purifies the atmosphere by absorbing and retaining its noxious and noisome gases and odors.—*Exchange.*

For the New England Farmer.

WOOL GROWING.

DEAR SIR:—A party of young gentlemen of the writer's acquaintance are proposing to emigrate to California, for the purpose of embarking in the wool-growing business. If the accompanying semi-playful, semi-serious lines, suggested by the simple fact above stated, have, in your estimation, vigor enough in them to go alone outside the little circle in which the circumstances of the case are known, you are at liberty to print them.

Respectfully yours, THE AUTHOR.

Boston, January 30, 1862.

ACADIA.

Away with all the Babel-war of trade,
With all the din by strong-limbed labor made,—
The smoke and rush which business loves to make
Where'er sharp Jonathan drives down his stake,—
The train's shrill whistle ushering from afar
The panting engine, and the clattering car,—
The dashing craft that scorns th' opposing wind,
Her streamers trailing like a cloud behind;
Away with all that hints of toils and cares,—
Bills, bonds, stocks, interest, merchandise and wares—
Which tell the texture of the age is one
Of gold and iron, intricately spun!

Time's wheels reverse, and down the travelled track
Roll back the years—by centuries roll them back!
Till earth again shall joyfully behold
Her childhood days—her age entirely gold!
What time the shepherds drove their flocks along
The silver streams, and meditated song:
Or stretched at noon beneath the greenwood shades,
Rehearsed the beauties of their sylvan maids;
When simple pleasures discontent defied,
And wants were few, and those with ease supplied;
Fair girls were "nymphs," and every youth a "swain,"
All speech was song—when Pan himself did reign!
Roll back the years till men again shall view
That age of joyance—live it o'er anew!

But, nay! there needs no rolling back of time—
Nought save the transit to one genial clime;
And that same onward circling of the spheres,
Which hath aforetime swelled the months to years!

In that famed region of the West, whose soil
Yields mainly gold to glad the sons of toil,
There lies a vale, through which a winding stream
Doth like a thread of burnished silver gleam,—
Where pastoral life—believe the Muse!—displays
To modern eyes the scenes of ancient days;
Where dwells a colony of gentle swains
Whose kings the atmosphere of cities pains;
A group of people who, on history's page,
Will doubtless shine th' ACADIANS of the age;
On whom the country will depend, to keep
The art of rearing and improving sheep!

When Spring again shall don her robes of green,
And bees and butterflies once more be seen;
When primrose blooms shall star the dales anew,
And violets lift their lips to sip the dew,

And yellow crocuses flaunt forth their gold;—
'Twould give mirth's eye a twinkle, to behold
These "shepherds" grasp their crooks and lead along
Their milk-white flocks—through slowly after throng.
'Twould brighten languor into smiles, to hear
Those gentle shepherds' "songs of lofty cheer"—
Or lays expressive of their ardent loves—
Float down the vales, and echo through the groves!
O, well will they the artless strain prolong—
Their thoughts prove idyls bubbling into song!

For them propitious seasons we invoke—
Upon their lambkins fall no blasting stroke!
The calm delights of pastoral life be theirs;
Its blest exemption from financial cares;
Its sheer disdain of Fashion's starch and paints;
Its glorious freedom from the town's restraints!
May robust health that flow of spirits bring
Which makes life's prime as joyous as its spring;
Theirs be the heaven of sweet domestic bliss—
The luxury theirs of tasting childhood's kiss!
May the new race to goodly stature grow,
Without the wisdom which the marts bestow;
Delight in Nature with her bosom bare—
The pathless hills—uncarbonated air;
Wearing no mask made up of wretched shams,
Scorning the cheater of cant and flams;
With scarce a cloud between them and the power
That gilds each star, and speaks in every flower;
Walk through the years—let wordlings, sneering, smile—
As little children ignorant of guile,
Until they reach—why may they not?—at last
To something of the ancient patriarch cast;
And like those men who lived in Time's far youth,
Through goodness' paths attain high heights of truth!
And if the world in after times once more
Shall need, like Sodom in the days of yore,
To save it from destruction's fiery rain,
Its men whose lives appear without a stain;
Then shall that vale, through which a winding stream
Doth like a thread of burnished silver gleam,
Send forth its "fives," its "fifties" o'er the earth,
And save the nations with its leaven of worth! ***

For the New England Farmer.

THE BRAHMA FOWL.

Having recommended to the readers of the *Farmer* of March 2, 1861, the Brahma fowl above all other varieties, I was pleased to find in a recent number of the *Genesee Farmer* an account of the experimental trial in France, at the Zoological Gardens, last year, testing the laying qualities of a large number of different breeds of fowls, resulting in favor of this breed. The *Brahma Pootra* stood first in the trial as the most prolific layer, which corresponds with my experience, as stated before. I have kept nearly every breed of fowls, but never found one to come up to the Brahma, not only in laying, but every other desirable quality requisite to a perfect breed of domestic fowl. A neighbor of mine has 17 Brahmas in one coop and 20 common barnyard fowls in another. fed and cared for alike; he tells me that he is getting from ten to twelve eggs per day from the Brahmas, and from the others he has not had an egg for the past month. Another gentleman informs me that he has always been obliged to purchase eggs for his family until this winter. He has tried many breeds of fancy fowls, and was almost discouraged, until induced to try the Brahmas, and this winter his fowls have been an income instead of an out-set, as heretofore.

JOHN S. IVES.

Salem, Jan. 31st, 1862.

For the New England Farmer.

ABOUT KEEPING GOATS.

The goat is a very social creature, and readily becomes attached to his protectors, and even to animals different from himself. We have heard complaints that a goat about the house is noisy, but if two or more are kept together they will soon learn to become very contented and quiet. They are frequently kept in stables with horses, under a belief that their peculiar smell contributes to the health of horses, but it is probable that whatever benefit is derived comes from the familiar companionship of the goats, for horses are fond of company to cheer the solitude. I have a goat which has formed an intimacy with a bantam pullet. The latter follows her about all day, and roosts near her head at night, which fond attentions are returned by various marks of sympathy. The famous friendship between Robinson Crusoe and his goats was as natural and sincere on their part as on his. They will become as familiar as dogs, and will come at the call of the voice with a hop, skip and jump. When roaming at large, they regularly return home at night. In Switzerland, large flocks come down to the farm-houses at night to be milked, and are turned out again in the morning to browse upon the mountains. They stand to be milked as quietly as a cow. A familiar illustration of their domesticity is afforded in their serving to draw children's carriages, often appearing to delight in their gay equipages. In India, the children of the Hindoos who have lost mothers were frequently suckled by goats. Travellers report that, in the countries of the Negroes, this is very frequent. The goat comes to the cradle where the infants lie, and manifests the utmost tenderness toward them.

The flesh of the older goats is said to be coarse and ill-flavored, but that of the kids when very young is much esteemed. It is freely eaten in Europe, and in the Southern countries it is served at table as regularly as lamb, and by most persons is considered the more delicate of the two. In Wales, where goats used to be very numerous, the haunches are frequently salted and dried, and supply all the uses of bacon, and are called "hung venison."

The goat is a lascivious and prolific creature. The female goes with young upwards of twenty weeks, and usually produces two at a birth, and sometimes three and even four. She sometimes breeds twice in the year. In the natural state, the coupling season is in November or December, and the kids are then born in the spring, when the tender herbage appears; and this is the best time, although when well fed she will receive the male at any season. She is fruitful at the age of seven months, but it is considered well that she should not breed before the second year. The usual life of the goat is stated to be from ten to twelve years.

Goats in the pasture are not likely to be worried by dogs, as sheep are, for they are bold in their own defence, putting themselves in an attitude of defiance when provoked by animals, however larger than themselves. A dog that will despise a ram and assail a bull, is frequently cowed by the bold demeanor and peculiar and vigorous butting of the goat.

There is one great objection to the keeping of

goats in town, which is, that they will devour every plant and small shrub, and bark every tree, within their reach. The latter form of mischief seems to be their especial delight. They must therefore be kept out of the garden, the orchard, and the nursery. In Wales, and other parts of Great Britain, where goats used to be numerous, they have been largely discarded of late years, on account of the damage done by them in cropping the hedges, which are there so common. So in the wide districts of Europe, they are discouraged on account of the injury they do the vines and forests.

The history of the goat is interesting. From the remotest times it has abounded in Europe, Asia and Africa, and has formed a large part of the wealth of the common people. Its ancient history is coeval with that of the ox and the sheep, and it is frequently mentioned in Scripture as forming with those animals the riches of the patriarchal families. His flesh was permitted by Moses to be used as food, and he was employed by the Jews as well as by the Egyptians, in religious ceremonies. His form is sculptured on the ancient monuments. In Greece and Rome he was valued for food and raiment. He was dedicated to Jupiter, sacrificed to various divinities, and his skin was the *Ægis* of the Goddess of Wisdom and Arms. His form was one of the attributes of Pan and the Satyrs, indicating the precreative power and rustic plenty. The goat was largely cultivated by all the early nations round the Mediterranean Sea, (where the finest kinds now are,) and by the Celtic and Teutonic nations in the North.

There are numerous varieties of the common goat, determined somewhat by climate and situation. Some naturalists suppose them all to have descended from the species *Ægagrus*, found wild in the Caucasian mountains. Others think they came from various distinct species. The small Guinea goats have been naturalized in America for a hundred years, but preserve their distinctive peculiarities unchanged.

The uses of this animal are numerous. We have spoken of its milk and flesh. The skins, as furs, form warm clothing in the northern countries. Without the wool, they are an important staple of commerce, to be made into leather. From goat skins we have the fine morocco leather for boots and gaiters. The skin of the kid is in universal demand for the manufacture of kid gloves. In Eastern countries, the skin is made into bags for water, wine and oil; and on the Nile, the Euphrates and other rivers, it is seen in the form of buoyant sacks, on which the inhabitants float across those streams. The hair of the goat, which may be sheared like wool, makes a superior rope, especially serviceable to be used in the water. With ropes of this material, the hardy natives of St. Kilda used to swing themselves over the dreadful precipices of their coast in search of the eggs of sea-fowls. The celebrated goats of Thibet, yield a fine wood, of which the splendid and costly Cashmere shawls are woven, with great pains and immense labor. The Goat of Angora, in Asia Minor, furnishes a long, silky, wavy hair, from which a kind of camblet is made, much prized for its durability. Of this material are formed the tents of the Arabs, the Turcomans, and all the wandering tribes of Tartary. A simi-

lar fabric is referred to in the Scriptures, "And thou shalt make curtains of goats' hair to be a covering upon the tabernacle." (Ex. 26: 7.)

Some attempts have been made to establish the Thibet and Angora goats in this country, an account of which at some time might be interesting.

G. L. STREETER.

Salem, Jan., 1862.

THE HORSE-HAIR.

In Professor Agassiz's interesting paper on "Methods of Study in Natural History," the second of the series in the *Atlantic Monthly*, we find this anecdote of an animal known to almost all country boys:

A gentleman from Detroit had the kindness to send me one of those long, thread-like worms (*Gordius*) found often in brooks, and called horse-hair by the common people. When I first received it, it was coiled up in a close roll at the bottom of the bottle, filled with fresh water, that contained it, and looked more like a little tangle of black sewing silk than anything else. Wishing to unwind it, that I might examine its entire length, I placed it in a large china basin filled with water, and proceeded very gently to disentangle its coils, when I perceived that the animal had twisted itself around a bundle of its eggs, holding them fast in a close embrace. In the process of unwinding, the eggs dropped away and floated to a little distance. Having finally stretched it out to its full length, perhaps half a yard, I sat watching to see if this singular being that looked like a long, black thread in the water, would give any signs of life. Almost immediately it moved towards the bundle of eggs, and, having reached it, began to sew itself through and through the little white mass, passing one end of its body through it, and then returning to make another stitch, as it were, till the eggs were at last completely entangled again in an intricate net-work of coils. It seemed to me almost impossible that this care of offspring could be the result of any instinct of affection in a creature of so low an organization, and I again separated it from the eggs, and placed them at a greater distance, when the same action was repeated.

On trying the experiment a third time, the bundle of eggs had become loosened, and a few of them dropped off singly into the water. The efforts which the animal then made to recover the missing ones, winding itself round and round them, but failing to bring them into the fold with the rest, because they were too small, and evaded all efforts to secure them, when once parted from the first little compact mass, convinced me that there was a definite purpose in its attempt, and that even a being so low in the scale of animal existence has some dim consciousness of a relation to its offspring. I afterwards unwound also the mass of eggs, which, when coiled up as I first saw it, made a roll of white substance about the size of a coffee-bean, and found that it consisted of a string of eggs, measuring more than twelve feet in length, the eggs being held together by some gelatinous substance that cemented them and prevented them from falling apart. Cutting this string across, and placing a small section under the microscope, I counted on one surface of such a cut from seventy to seventy-five eggs; and esti-

imating the entire number of eggs according to the number contained on such a surface, I found that there were not less than eight millions of eggs in the whole string.

For the New England Farmer.

BREEDS OF STOCK.

In times gone by, I have taken an interest in breeds of cattle, and all discussions that tended to illustrate what classes of cattle were best suited to the farms of New England. This inquiry will depend somewhat upon the uses to be made of the cattle. If they are to be fed for the stall, this is one thing; if they are to be kept for dairy purposes, this is another. On most of our farms neat cattle are kept for the milk they will yield—therefore those which yield the greatest quantity, the quality being equally good, are to be preferred. So far as I have seen, and I have seen many herds, I have never seen any that would yield more milk at the same expense of feed, than our New England stock, sometimes called native. For this reason, I have ever been an advocate of our native stock, and shall not be disposed to abandon them until others are proved to be superior. I know there are here and there to be found choice animals of the imported breeds—such as the Durham, the Devons, the Ayrshires, the Jerseys, the Herefords, &c., which have done great things. But I have never seen any considerable number of such animals on any one farm—and know not now where they are to be found. I had supposed our friends Howard and Sheldon, could tell us all about these animals. Certainly, no men among us have had more extended opportunity for observation. Mr. Howard has visited the best herds of England and Scotland for the express purpose of learning all about them—and Mr. Sheldon has been a man of practical experience, ever since I was a boy, and there is no one who will deny him the credit of being a shrewd observer—of animals and men.

The real question is, how shall we select a stock of cattle suited to our farms? I say, choose those which yield the best product on the same expense of feed. And from the best cows raise your own calves, always taking care to use bulls that sprung from good cows. For in rearing stock, quite as much depends upon the sire as upon the dam. I remember this was the opinion of my old master Pickering.

J. W. P.

Feb. 10, 1862.

ROOT CUTTER AND CLEANER.—A writer in the *Country Gentleman* says:

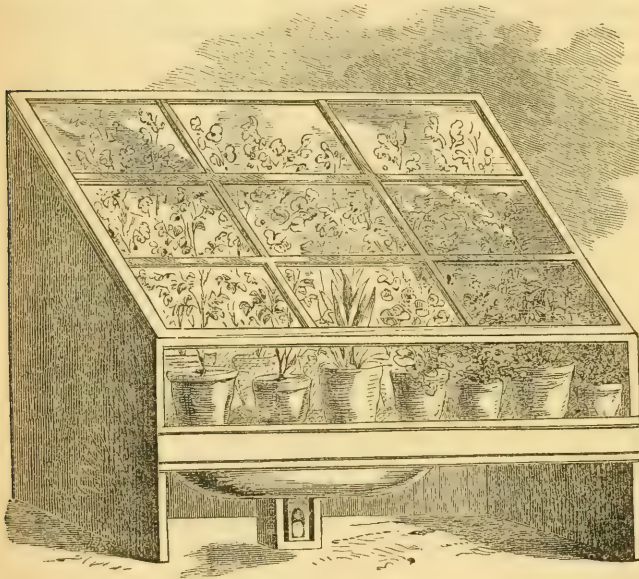
When potatoes are fed whole, or other roots are cut coarsely, the animal is obliged to hold its head so high to keep the root in contact with its teeth, that gravitation alone will pass it to the gullet, and ordinarily it will pass thence unmasticated, if not too large; but if cut properly and mixed with cut stalks, straw or hay, as they always should be, they will be eaten with the head down, as in eating grass, and consequently be more thoroughly masticated and mixed with other food, and all danger from choking is wholly avoided; hence the preventive that I have used for five years, and recommended to others to use, is, to cut up the vegetables as finely as possible with a good root cutter and cleaner.

For the New England Farmer.

A NEW PROPAGATING CASE.

I have no doubt that many of the readers of the *Farmer* have often wished that they had facilities for propagating plants and flowers where bottom heat is necessary, such as starting very early tomato, cabbage and lettuce plants, striking cuttings of grapes, roses, &c., and starting early plants for the flower-garden. But to start the former very early, or to strike cuttings successfully, requires a gentle bottom heat, and an atmosphere completely under our control. The few who are fortunate enough to possess hot-houses, have, of course, all the facilities for such purposes; but of the many who would like now and then to propagate a few plants or flowers for their own use, or pleasure, not one in one hundred have either hot-houses, or even hot-beds. And then the latter, (hot-beds,) are really troublesome and expensive affairs, and but few can afford either the time consumed in making and tending them, or the expense of operating them.

For the possible benefit of these many, I propose to give a description of a small propagating case I had made for my own use, and which is now in successful operation.



It may be briefly described as a box, 33 inches long, 18 inches wide, 18 inches high in front, and 24 inches high at the back. Twelve inches above the bottom, we placed a zinc pan, or tray, two inches deep, and as large as the case would admit of. This pan rests on cleats, nailed to the inside of the case. On the under side of this zinc pan, we soldered the oval shaped copper bottom of a common cooking-stove wash-boiler, such as may be found at almost any tinsmith's. (Sheet iron, copper, or tin, may be used instead, if more convenient.) This forms a sort of boiler, about fifteen inches long, six inches wide, and two inches deep. It is filled through a tube, from the upper side. For convenience, this tube should be about six inches long, and one-half or three-fourths of an inch in diameter. On the top of the case, we

simply lay two squares of glass. To prevent the glass from sliding off, the upper edge of the case is halved. The boiler is filled with water, a common fluid lamp is filled with alcohol, and placed under the copper boiler, (burning fluid will answer, but is less clean, and is rather offensive to the smell,) the zinc pan is covered one inch deep with clean sand, the pots (smallest size flower-pots) containing the seeds, or cuttings, are placed on the sand, a small thermometer is hung inside the case, the glass is laid on, and the miniature hot-house is in full operation. It should be placed near a window, where it can receive the benefit of the sun during the day. The thermometer should not be allowed to go below 50°, nor above 60° at night, but may rise to 70°, and even 80°, in the middle of the day. Care should be taken to ventilate well in the day time. This is done by raising the back edge of one or both panes of glass, according to circumstances. With these very general hints as to temperature and ventilation, there need be no difficulty in managing such a case successfully.

I have found that a steady flame, three-fourths of an inch high, from a single tube of a common fluid lamp, is amply sufficient for ordinary winter weather. (The larger the lamp, the less trouble in filling it.)

My case is usually placed, when in operation, at the kitchen window. It looks well enough, however, to grace the windows of the sitting-room, or even parlor. Such a case should be made of well-seasoned wood, be dovetailed together and thoroughly painted inside and outside. If the window be high, the case will need legs—or it may be placed on a table—so as to bring the pots near the glass. The lower half of the back of the case is hinged, for convenience of managing the lamp. My first case was but 12 inches deep at the back, and 6 inches in front, and the lamp had no protection against drafts of air. This was found to be troublesome, and I was obliged to box in the lamp. Now all the heat is saved, the lamp is secure, and the extra room is convenient for storing spare pots, &c.

As the boiler is placed in the centre of the case, it will readily be seen that that part will be the warmest. This is taken advantage of, by appropriating it to the use of such pots as need the most bottom heat, gradually removing them toward the edges as they need to be "hardened off." If the case is divided into two parts, by a partition, one part can be used, at pleasure, for this hardening off process, preparatory to placing the plants in the ground, or elsewhere.

These cases can be made of any size or style desired. They are neater, easier operated, and cost less than the ordinary hot-bed. The one above described, though placed in a room where the fire is never kept over night, and seldom even in the evening, consumes but one gallon of alcohol per

month, at a retail cost of 60 cents—or two cents per twenty-four hours. The cost of the case was as follows:

Lumber and making, \$2.25; copper boiler bottom, 70 cts.; zinc and making of pan, &c., 75 cts.; two squares glass, 50 cts.; lamp, 20 cts.; painting, 50 cts.; castors, (for convenience of moving,) 17 cts.; hinges, 6 cts.; thermometer, 37 cts.; total, \$5.50. These are city prices. In most localities they would be somewhat less.

A case of the above dimensions contains room for fifty-four No. 7 flower-pots. It will be readily seen from this, that it can be made to do a great deal of work.

PEOPLE WHO HAVE BEEN HELPED.

There is really very little that can be done for one man by another. Begin with sense and genius, keen appetite and good digestion, and the work goes on merrily and well; without these, we all know what a laborious affair, and a dismal, it is to make an incapable youth apply. Did any of you ever set yourselves to keep up artificial respiration, or to trudge about for a whole night with a narcotized victim of opium, or to transfuse blood, (your own, perhaps) into a poor, fainting, exanimate wretch? If so, you have some idea of the heartless attempt, and its generally vain and miserable result, to make a dull student apprehend, a debauchee interested, active, or knowing in anything beyond the base of his brain, a weak, etiolated intellect hearty and worth anything. And yet how many such are dragged through their dreary *curricula*, and by some miraculous process of cramming, and equally miraculous power of turning their insides out, get through their examinations; and then—what then? Providentially, in most cases, they find their level. The broad daylight of the world, its shrewd and keen eye, its strong instinct of what can and what cannot serve its purpose—puts all, except the poor object himself, to rights. Happy is it for him if he turns to some new and more congenial pursuit in time.—*Dr. Brown.*

SINGULAR DETECTION OF A THIEF.—A musician employed at one of the London theatres, possessed an ebony flute with silver keys. He seldom used it, however, in consequence of one of the upper notes being defective. The musician had for a lodger, a young man, a theatrical tailor, and between the two there existed a considerable friendship. Well, one night, while the musician was away at his business, some one stole the flute with the silver keys, and suspicion fell on an old char-woman, who used to come to do the house-work. However, nothing tended to show that the old lady really was guilty, and the affair was shortly forgotten. In a few months the tailor left the house of the musician, and went to live in a town a few miles off; but as the friendship between the two men still existed, they occasionally visited each other. Nearly a year afterward, the musician paid the tailor a visit, and was pleased to find him in possession of a beautiful bulfinch who could distinctly whistle three tunes. The performance was perfect, with this exception—whenever he came to a certain high note, he invariably skipped it, and went on to the next. A very little reflection convinced the musician that the note in

which the bulfinch was imperfect, was the very one that was deficient on the flute. So convinced was he, that he at once sharply questioned his ex-lodger on the subject, who at once tremblingly confessed the guilt, and that all the bird knew, had been taught him on the stolen flute.—*Beeton's Home Pets.*

EXTRACTS AND REPLIES.

SALT AND PIGS—SCRAPING TREES.

Being a reader of your valuable paper, I will take the liberty to make a few inquiries.

Is salt good for young pigs? If so, in what manner, how often, and in how large a quantity must it be given? I have a pig that has a cough—is there any remedy for it?

Is there any harm in scraping trees in the fall or spring? If not, when is the best time?

A. I. NEWHALL.

East Saugus, Feb. 8, 1862.

REMARKS.—All animals, even fowls, need salt. We know of no rule for giving it to them. Feed a small quantity two or three times a week to the pigs, and if they flourish under it, continue to do so, and increase the quantity as they increase in size.

Feed the pig with a cough on warm, nutritious food, but not in large quantity, and give him a *dry, warm* place, where he can lie and sleep without being at all chilled. He will be grateful enough to soon recover.

If trees are thickly covered with moss, they are probably in an unhealthy condition. Scraping will be useful to them, but breaking up the sward, manuring and cultivating will be better. It is doubtful whether scraping young trees is of further use than to gratify the eye. The bark upon a tree which has always had a healthy growth, will sometimes be very rough—but that it does any injury, either by harboring insects or in any other way, we have never learned. It may be some protection against summer suns, and perhaps winds. We are not aware, however, that it does any special injury to scrape away a portion of it, if it is done with care, at any season of the year.

WILL THE ARMY WORM COME AGAIN?

Can you tell me if the army worm is sure to appear again where it was last year? Many farmers in this vicinity had fine crops completely destroyed by them; they seemed to relish everything but potatoes. So unexpected was their appearance last season, (I never saw any before,) that we come to you to know if they are to make their advent again *this* summer coming.

I am exceedingly anxious to know, not wishing to go to the expense and labor of sowing seed the profits to be reaped by them.

Fisherville, R. I. CALEB CONGDON.

REMARKS.—We have no doubt but the army worm, so called, that did so much mischief last summer, will appear next summer. But we cannot *promise this* positively.

EXPERIMENTS WITH POULTRY.

Below I give you the result of a few experiments in keeping hens. The first was with 13 hens and a cock. My hens are what is called the "common fowl." I sold

172 dozen eggs, for.....	\$28.08
Sold poultry.....	5.67
Kept 40 pullets.....	10.00

	\$43.75
For cost of keeping.....	29.55

Profit.....	\$14.20
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Second experiment with 55 hens.

520½ doz. eggs and poultry sold, with value of those left for my own use.....	\$155.70
Cost of feed, &c.....	101.28

Profit.....	\$54.42
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Third experiment with 159 hens. They laid in a year 1,556½ dozen eggs. Average to a hen one year, 117 45-100, and thirty of them had chickens to bring up. From Dec. 1 to June 1 average to a hen 64 eggs.

By eggs and poultry sold.....	\$202.66
By pullets, extra from what I commenced with.....	9.81
By Leghorn cocks for sale.....	12.00

	\$314.47
To cost of feed.....	\$162.74

To rent, tools, interest.....	11.50
	\$174.24

Leaving profit of.....	\$140.23
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I now have to keep 226 hens and 17 cocks. I find the Leghorn white fowls the best I have got for laying and eating, as their flesh, being yellow, sells better in market than the Bolton Greys, which lay quite as well. I have the Leghorn fowls for sale at \$2.25 a pair, and eggs for hatching at 75 cents per dozen.

In trying to raise chickens without the hens going with them, I found that what I raised cost when hatched, 7½ cts. I find I have much the best luck in raising chickens in letting the hen have 25 to 30 each, in a coop. In the above experiments I have not given any credit for manure, which will sell, I think, for about 33 cts. a hen, or as some think, it will raise a bushel of corn, if properly taken care of, and applied to the ground.

JOHN M. MERRILL.

Bristol, N. H., Feb., 1862.

TURNIPS FOR SHEEP.

I would like to inquire through your paper whether the flat English turnip is good for sheep in the winter months, when they can be raised at a small cost? SULSCRIBER.

Mechanicsville, Vt., 1862.

REMARKS.—Excellent, no doubt. Cut them into small pieces, and feed them once a day, a quart or two to each sheep. —

ATTACHING A SAW TO A THRESHER.

Will some of the readers of the *Farmer* inform me how to attach a large saw to a common threshing machine? E. B. P.

Mechanicsville, Vt., 1862.

TREATISE ON THE SILKWORM.

Will some of your readers inform me what is the title of the best treatise on the culture of the silk-worm in New England, and where it is to be obtained? C.

LADIES' DEPARTMENT.

WINTER SCENES.

That old red sleigh, with its long box that never was full, for down in the straw, wrapped in the robes, or on one or another of the four seats it contained, there was always room for one more! What a grouping of bright, young faces there used to be in it—faces in hoods, in caps and in blankets; hearts that have loved since; hearts that have broken; hearts that have mouldered. And away we went over the hill and through the vale, under the moonlight and under the cloud; when the stars were looking down; when the sun kindled the world into a great, white jewel. But those days have gone forever away, and the sweet old necklace of bells, big in the middle of the string, and growing small by degrees, has lost its power over the pulses.

In that old sleigh, brides have gone away before now—those that were married to manhood, those that were "married unto death." Great ships have gone over the waters with less of hope and happiness than that rude craft has borne over the billows of winter. Swan-like shapes now glance along the arrowy way, but give us, for its sweet memories of yesterday, the old red sleigh.

Then, the days when we were "coasters," and down the big hill, by the maple wood, through the little pitches, far into the valley, we came with merry shout, each the solitary Palinurus of his own small craft. How like a flock of swallows we were, dashing down the declivity, in among a group of sleds, side by side with a rival, shooting by like an arrow, steering in gallantry ahead like a jockey, and on our way up with a sled in tow, ere the party had reached the valley below!

And then it was, when the wind had swept away the snow from the pond and stream, and the ice was glare, that we put on the "rockers," and darted hither and thither, and cut sixes and eights, and curves without number, and drew the girls we loved, and whirled them like leaves over the highway of crystal.

And the schools where we spelt each other down, and the schools where we sang Windham and Mear, and the schools where we ciphered and wrote, and "went up"—gone, all gone, teacher and taught, like the melting snow under the rain-bows of April.

And when, sometimes, after the great snow, the winds came out of the north for a frolic, what wreathing and carvings of cold alabaster there were! What Corinthian adornings surmounted the fence posts! what mouldings were fashioned beside the way! what fairy-like caves in the drifts! what flowers of rare finish and pendants of pearls on the trees!

Have you quite forgotten the footprints we used to find in the damp snow, as delicate, some of them, as a love-letter; the mysterious paths down to the brook or by the old hollow tree, that we used to wonder over and set "figure fours" by, if perchance we might catch the makers thereof? Have you quite forgotten how sorry you were for the snowbirds that fluttered among the flakes, and seemed tossing and lost in the storm?

And there, in the midst of that winter, Christmas was set, that made the Thanksgiving last all through the night of the year—and what wonder

the stars and fires burned more brightly therefor—Christmas, with its gifts and its cheer, its carol and charm, its evergreen branch and its bright morning dreams; Christmas, when there were prints upon the chimney-tops, if we were only there to see them, where Santa Claus set his foot as the clock struck twelve; Christmas, when stockings were suspended by hearth and by pillow, all over the land—stockings silken and white—stockings homely and blue, and even the little red sock, with a hole in the toe? Blessed forever be Bethlehem's star!—*Chicago Journal*.

THE SICK IN BED.

With a proper supply of windows, and a proper supply of fuel in open fireplaces, fresh air is comparatively easy to secure when your patient or patients are in bed. Never be afraid of open windows, then. People don't catch cold in bed. With proper bed-clothes, and hot bottles, if necessary, you can always keep a patient warm in bed. Never to allow a patient to be waked intentionally or accidentally, is a *sine qua non* of all good nursing. If he is roused out of his first sleep, he is almost certain to have no more sleep. It is a curious but quite intelligible fact, that if a patient is waked after a few hours' instead of a few minutes' sleep, he is much more likely to sleep again; because pain, like irritability of brain, perpetuates and intensifies itself. If you have gained a respite of either in sleep, you have gained more than the mere respite. Both the probability of recurrence and of the same intensity will be diminished, whereas both will be terribly increased by want of sleep. This is the reason why a patient waked in the early part of his sleep, loses not only his sleep, but his power to sleep. The more the sick sleep, the better will they be able to sleep. A good nurse will always make sure that no door or window in her patient's room shall rattle or creak; that no blind or curtain shall, by any change of wind through the open window, be made to flap; especially will she be careful of all this before she leaves her patient for the night. If you wait till your patient tells you or reminds you of these things, where is the use of his having a nurse?—*Florence Nightingale*.

A HINT OR TWO.—To keep ice from windows, take an ordinary paint brush or sponge, and rub over the glass once or twice a day a little alcohol, and it will keep the glass as free from ice as in the middle of summer; and it will also give as good a polish as can be got in any other way.

Isinglass is a most delicate starch for muslins. When boiling common starch, sprinkle in a little fine salt; it will prevent it sticking.

For fruit and wine stains, mix two teaspoonfuls of water and one of spirit of salt, and let the stained part lie in this for two minutes; then rinse in cold water; or wet the stain with hartshorn.

CAREFUL READING.—It is not unusual that the second reading of any work is more profitable than the first; and the third or fourth often results in new discoveries of much value and profit. The truth is, most of us read too superficially. We study and analyze too little—in other words, we think too little—don't we? Let us reform in this respect.—*Rural New-Yorker*.

HOW TO COOK EGGS IN THE SHELL.—A correspondent of the *Agriculturist* writes:

One way to cook eggs is to drop them into boiling water, and let them remain there three minutes—the water all the time boiling. This hardens the white next the shell to almost leathery toughness, while within it is still not cooked. Another and preferable mode is, to pour boiling water upon the eggs; let them stand in this five minutes; pour off this, and add more boiling water, and immediately bring them to the table *in the water*. Those taken out at once will be somewhat cooked through; and those left in five minutes will be “hard boiled,” or nearly so, and thus the taste of every one may be suited, and no toughness of the whites be observed.

YOUTH'S DEPARTMENT.

LITTLE CHILDREN.

The scattered crumbs upon the floor;
The rattling playthings by the door;
The finger-marks on point and pane—
All are signals showing plain
There are little children here.

The tongs outstretched upon the floor;
A broken ark, and shipwrecked Noah;
A horse with tail, nor ears, nor mane—
All are signals showing plain
There are little children here.

The high chairs ranged against the wall;
The small coat hanging in the hall;
The little shoes, and little cane,
Add to the signals showing plain
There are little children here.

But now I must resign my pen;
The children have come back again;
They but ran out in mud and rain,
To bring new signals, showing plain
There are little children here.

PLAYING FOR KEEPS.

We are told that this story is *real*, as children say. There are a great many little boys who are in the habit of playing for keeps. We hope they will not only read this story, but that they will resolve never to take this their first lesson in gambling:

“See, mother, what a lot of marbles I've got!” said John. “I want you to make me a great big bag to put them in.”

“Why, where did you get so many, my son?” asked his mother.

“I won them from Pete Jones. See, I got his glass taw, too. I loaned him one of mine to play with while he put that in the ring. Isn't it pretty?”

“How much did you pay him for them?”

“Pay him! Nothing. He and I played for ‘keeps,’ and I was the best player, and won all his.”

“How much did they cost, Peter, do you suppose?”

“If he bought them, they must have cost him about a dollar.”

“And you got them for nothing?”

“I played ‘upon the square,’ and Pete said I got them all fair.”

"So now you have got a dollar's worth of marbles, for which you never paid one cent!" said his mother, slowly and with emphasis.

John, who was an honest boy, looked at her as if he did not fully comprehend the extent of her meaning.

"Mr. Lowly," continued his mother, "is a gambler, and he wins other people's money in the same way. He plays 'upon the square,' he says."

As the truth flashed upon John that he was a gambler, he burst into tears, and asked his mother what he must do. After showing him how little evils expanded into greater, and how persons were tempted to cheat and defraud when there was a prospect to make anything by it, she told him to return all Peter's marbles, and then go and ask God to forgive him.

Peter seemed very thankful to get his marbles back. John left him whistling a merry tune, which seemed just like he was saying, "Johnny an't going to be a gambler."

EDUCATED FEET.

Who can tell to what uses the feet and toes could be put, if a necessity arose for a full development of their powers? There is a way of educating the foot, as well as the hand or the eye; and it is astonishing what an educated foot can be made to do. We know that in the time of Alexander, the Indians were taught to draw their bows with their feet, as well as with their hands, and Sir J. E. Tennent tells us that this is done up to the present time by the Rock Veddahs, of Ceylon. And nearly all the savage tribes can turn their toes not only to good, but bad account; like the aboriginals of Australia, who, while they are cunningly diverting your attention with their hands, are busily engaged in committing robberies with their toes, with which they pick up articles as an elephant would with his trunk. So also the Hindoo makes his toes work at the loom, and weaves with them with almost as much dexterity as with his fingers. The Chinese carpenter will hold the bit of wood he is planing by his foot, like a parrot, and will work a grindstone with his feet. The Banaka tribe, who are the famous canoe-men on the West African coast, will impel their light canoes—weighing only from eight to ten pounds—with great velocity over the waves, and, at the same time, will use the foot to bail out water; and when they would rest their arms, one leg is thrown out on either side of the canoe, and it is propelled with the feet almost as fast as with a paddle. There was also Monsieur Ducornet, who died only four years ago, who, although he was born without hands, was brought up as an artist, and who annually exhibited at the Louvre pictures painted by his feet. Then there was Thomas Roberts, the armless huntsman to Sir George Barlow, whose feet were made to perform the duties of his hands. And there was William Kingstone, who with his toes wrote out his accounts, shaved and dressed himself, saddled and bridled his horse, threw sledge hammers, and fought a stout battle, in which he came off victorious.—*Cuthbert Bede's Glencreggan.*

THE CATTLE MARKETS FOR FEBRUARY.

The following is a summary of the reports for the four weeks ending February 20:

NUMBER AT MARKET.				
	Cattle.	Sheep.	Shotes.	Live Fat Hogs.
January 30.....	804	2470	400	200
February 6.....	1294	3571	250	150
“ 13.....	989	3238	250	50
“ 20.....	1810	2502	150	—
Total.....	4397	11811	1050	400

PRICES.

	Jan. 30.	Feb. 6.	Feb. 13.	Feb. 20.
Beef cattle, 4¢ lb.....	4 $\frac{1}{2}$ @ 6 $\frac{1}{2}$ c	4 $\frac{1}{2}$ @ 6 $\frac{1}{2}$	5 @ 7	5 @ 6 $\frac{1}{2}$
Sheep, live weight.....	4 $\frac{1}{2}$ @ 6	4 $\frac{1}{2}$ @ 6	4 $\frac{1}{2}$ @ 5 $\frac{1}{2}$	4 $\frac{1}{2}$ @ 5 $\frac{1}{2}$
Swine, wholesale.....	3 $\frac{1}{2}$ @ 4 $\frac{1}{2}$	3 $\frac{1}{2}$ @ 4	3 $\frac{1}{2}$ @ 5	4 $\frac{1}{2}$ @ 5 $\frac{1}{2}$
“ “ retail.....	3 $\frac{1}{2}$ @ 4 $\frac{1}{2}$	4 @ 5	4 @ 6	5 @ 6
Live fat hogs.....	3 $\frac{1}{2}$	3 $\frac{1}{2}$ @ 4 $\frac{1}{2}$	4 $\frac{1}{2}$	—

At this market, prices and estimates of beeves are based on the total weight of hide, tallow and dressed beef; in New York, on the weight of beef alone; a difference of something like one-fifth. That is, an animal whose four quarters weigh 100 lbs. each, would be rated in Brighton as dressing about 500 lbs., and in New York at 400 lbs., and consequently 4¢ @ lb. in this market would amount to the same sum as 5¢ @ lb. in New York. The "fifth quarter," as the hide and tallow are often called, is heavier, in proportion to the meat, in very fat than in light animals.

REMARKS.—The Northern cattle and sheep at market the past month have been very good, many of them being really well fattened. But few stores have been offered for sale, and but few have been called for.

In the price of working oxen and milch cows, there has been but little change during the month. Our reports of sales have not been very numerous of either class. Pretty good oxen are sold at from \$75 to \$150 @ pair, and cows from \$25 to \$45.

The cattle and sheep alluded to in the following paragraphs were at Brighton Market, February 20:

MAMMOTH CATTLE.—Messrs. Scollans & Flinn put five of their Western beeves into a yard by themselves on Wednesday, which were visited as curiosities by nearly every person on the ground. They were fed by J. Dennis, Esq., of Niles, Cayuga Co., N. Y. One pair of Durhams which had been in his stable for three years, weighed at Albany 6050 lbs. Another five-year old pair, of the "moody" or no-horned race, weighed at home 5000 lbs., and at Brighton 4800 lbs. But the lion of the party was a four-year old steer, which weighed at home 2900 lbs. This steer had no appearance of being over-grown or awkwardly fat, deeply as his ribs were covered, but was well-proportioned, tidy-looking and pretty spry, notwithstanding his great weight. The same might be said of the Durham oxen, while, to my eye, the no horns were less comely. The whole lot were rich animals, such as I have not been accustomed to look upon, and good judges said, such as are seldom seen either in Brighton or N. York. I understood they were not sold at the time I saw them, nor did I learn the price, but it is to be hoped that the lovers of good beef will reward Messrs. Scollans & Flinn, not only for the pleasure they may enjoy at the dinner-table, but for that afforded to the many admirers of "neat stock" who saw them at Brighton.

GREAT SHEEP.—Wales, Curtis & Sinclair sold to J. W. Hollis 9 Cotswold and Leicester sheep which weighed at Albany 2400 lbs., or an average of 267 lbs. each. They were all smooth wethers, no horns or stags in the lot. Four of them were raised in Albany county, and 5 in Genesee. Only 1 had been slaughtered, and that yielded 33 lbs. of rough tallow, which we were told, Mr. Hollis said was the largest amount he ever took from any one sheep before. Those acquainted with the kind of sheep slaughtered by Mr. Hollis for many years past will not need any further particulars of this lot, except that we understood the sheep cost about \$25 each.

COMPARATIVE VALUE OF OATS AND ROOTS.—Four and two-thirds pounds of oats are estimated by analysis to contain a little over one pound of flesh, muscle and fat forming principles; to equal that it will take, of carrots, nearly nine lbs.; of Aberdeen turnips, near twenty lbs.; and of Swedish turnips, near seventeen pounds. It will be seen that the difference is greatly in favor of oats.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. XIV.

BOSTON, APRIL, 1862.

NO. 4.

NOURSE, EATON & TOLMAN, PROPRIETORS.
OFFICE....100 WASHINGTON STREET.

SIMON BROWN EDITOR.
HENRY F. FRENCH, ASSOCIATE EDITOR.

CALENDAR FOR APRIL.



APRIL is supposed by scholars to have derived its name from the Latin word *Aperire*, signifying to open, because in those countries where our months were named, the buds open themselves at this season of the year. They also tell us that Charlemagne, in his new calendar, called it *grass month*, the name still given to it by the Dutch. It is possible that if these scholars, Charlemagne and the Dutch, had lived in New England, the christening of their *Aperire*, or *grass month*, would have been postponed at least one new moon.

To be sure, the buds do open themselves somewhat, and the grass starts more or less before the last blast on the horn of April is blown, but with us both buds and grass often have occasion to repent of their rashness and haste. Only last year, (1861,) in the first part of the month, the earth was covered a foot deep with snow, where it lay as it fell; and from two to six feet, where drifted by the wind. Near our own residence there was a drift about three feet deep, extending for rods, and terminating in a pile, against an embankment wall, measuring eight feet in height. Highways were blocked up, and passenger trains on the railroads delayed. This, we know, was an unusual storm for April, but unusual chiefly in respect to the depth of the snow. Storm and sunshine are the order of the month. We must dodge the one as well as we can, and improve the other the best we know how. There is much work to be done

in April. While the Italian, French, and even the English farmer, have three or four months of veritable spring weather, we have but two at best; and old winter claims a portion of one of these, and in some parts of New England enforces her claims for the lion's share of April.

Much as there is to do, however, in so little time, don't drive the boys too hard at first. After studying in a warm room for three or four months, it is rather tough—we remember it very well—to face these cold winds, and to take hold of outdoor work in earnest. It may encourage some of these tender-handed school-boys to be told that it is not the sons of New England alone that complain of similar hardship. According to one of the oldest of the ancient poets, those farmers who dwelt in the comparatively warm climate of the region bordering on the Mediterranean Sea made a great fuss about the cold and hardship of plowing time. They went so far as actually to cry,—“bawl,” the Yankees would call it,—while plowing the ground and sowing the seed. It seems that the poor fellows got bravely over this “crying spell” before harvest, for they are represented as quite jolly at reaping time. We make a brief extract from the poem alluded to, as some of our readers may be glad to preserve even a small portion of perhaps the most ancient agricultural poem extant:

“They that sow in tears
Shall reap in joy:
He that goeth forth and weepeth,
Bearing precious seed,
Shall doubtless come again with rejoicing,
Bringing his sheaves with him.”

We quote from the same author, whose writings were probably the models of the sayings of Franklin's “Poor Richard,” one of the old saws with which parents, four thousand years ago, used to encourage their sons to brave the chills of April:

“The sluggard will not plow by reason of the cold;
Therefore he shall beg in harvest, and have nothing.”

There is yet a little patch of evening left for the boys to read. They may have left school for the season, or for life, but their education is not finished. Let them have a few moments with their books, and papers, and thoughts, especially in these days,

"For we are living, we are dwelling, in a grand and awful time, In an age on ages telling—to be living is sublime."

A singular notion seems to have been harbored in many people's heads, until it is nearly condensed into a proverb, something like: *Learning can't be lost*. Therefore, when the school closes, down go the lids of the books of their children, to be raised only when school again opens. Yet these same people will sometimes claim to have forgotten more in a year than most know at one time. The fact is, we forget so fast that almost constant practice is necessary to keep our knowledge of any branch of science or art available. For this reason it may be cheaper to let the boys review their lessons occasionally, evenings and stormy days, than to neglect study entirely till school time comes round again.

The young folks generally intend to have a little fun on the first day of this month, which is called "*April Fools' Day*," not only in New England, but wherever the English language is spoken. The New American Encyclopædia says that the custom of sending people on empty errands, and laughing at them, is common in every country of Europe, and wherever the European races have settled on this continent. Two accounts are given of its origin. The Oriental scholars say that it is derived from the *huli* feast among the Hindoos, where a similar custom prevails. The other opinion is, that it comes from a celebration of Christ's being sent about to and fro between Herod, Pilate and Caiaphas. In France, the foolish person is called *poisson d'avril*, meaning a silly fish, like a mackerel, easily caught. In Scotland, he is called *gowk*, which means a cuckoo.

By the first of this month, farmers in this section hope to start the plow. This is a most important branch of our business, and we submit as a proper subject for special thought and study during the month of April, the *principles and practice of plowing*—the whys and wherefores, as well as the how.

COAL OILS.—The New York correspondent of the Boston *Commercial Bulletin* says: "The kerosene and coal oil trade is very much depressed, the supply being largely in excess of the demand. The refined oil now sells at from 28 to 30 cents, which, at the present rate for crude stock, will not pay a profit to the refiners, and the works in this vicinity are being very generally suspended. Some parties are buying up and storing large quantities of the manufactured oil, in anticipation of an excise duty of ten cents per gallon, being levied up-

on the manufacture by the new revenue act about to be passed upon by Congress. Enormous quantities of the article are stored in this vicinity, and the receipts of both crude and refined oil from the wells and Western factories are very heavy."

THE CATTLE DISEASE.

We are glad that the Board of Agriculture has thought it proper to call attention to this matter. There are those who believe the disease is not contagious. We have *seen enough* to convince us that it is, and that there is imminent danger of its sweeping with destructive power over the whole State. It is more than folly to neglect its encroachments. It is among us *now*, beyond doubt or cavil, and every prudent measure should be adopted to arrest it, whether it is contagious or not. If those who object to action in relation to it would visit diseased herds, examine animals when slaughtered, and make careful inquiries into the nature of the disease, they would be quite likely to be more consistent in their opposition to investigation and the measures to prevent its extension.

REPORT ON THE CATTLE DISEASE.

The undersigned, a Committee appointed by the Board of Agriculture to prepare a statement of facts for publication in relation to the cattle disease, would respectfully report that—

Having good reasons to fear that the disease known as pleuro-pneumonia (so fatal in its ravages among the neat stock of North Brookfield and vicinity in the years 1859 and 1860) has again made its appearance in several towns in the county of Norfolk, they feel it the duty of this Board to warn the farmers and others, owners of neat stock in the Commonwealth, that the time has arrived for them to take every precaution to prevent the spread of this scourge; and in view of its contagious nature they would urge the necessity of the greatest care being taken by all interested in purchasing or permitting strange cattle to come in contact with their herds.

The disease now claiming our attention made its appearance in the town of Quincy last April, breaking out in two herds nearly simultaneously. Eight animals from one of the herds were sold to a person in Randolph, in the month of September, for eighty-five dollars for the lot. One of these animals died before reaching the home of the owner, and three more shortly after. The other four have been lost sight of. One herd in Milton, and also one in Dorchester, have been affected for some months. Four animals from one of these herds, which had been sick during the summer of last year, but had apparently recovered, were taken to Brighton in the fall and sold. Four of the other herd have since died or been killed—all presenting a seriously diseased appearance. On examination by the veterinarians conversant with the Brookfield complaint, they pronounced it identical, so far as they could judge. There are four or five animals still left of this herd, some of which are either sick or showing symptoms of contagion. There are also other cases which have not been examined—the Selectmen of the towns waiting the action of the Legislature in passing a law authorizing a new commission. The law has now been passed, and the commissioners appointed, and we would respectfully urge upon the gentlemen composing that commission the great importance of immediate measures to investigate the disease, and, if necessary, applying the remedies placed by the law in their hands, that the ravages of this fearful pest, (which there is little doubt is identical with the Brookfield disease, and which can be traced to that neighborhood,) may be stayed.

There still being doubters in the community as to

the existence of contagious pleuro-pneumonia, earnest attention is called to the thorough and convincing report of the first Board of Commissioners, with accompanying documents, published in the report of the Secretary of the Board of Agriculture for 1860.

We believe that no person, however prejudiced he may have been, who has been present at the examinations of affected animals, has failed to become convinced of the contagiousness of the disease; and it would seem impossible that any one can doubt this fact who will take the trouble to examine the various reports that have been made in Europe and in this country on the subject. (Signed)

HENRY H. PETERS, of Southborough,
PHINEAS STEDMAN, of Chicopee,
FREEMAN WALKER, of North Brookfield,
Committee.

Boston, Feb. 27, 1862.

FACTS AND FANCIES.

SUGAR FOR THE MILLION.—Everybody likes sugar—and sugar likes everybody, taken in proper quantity. It is both nutritious and healthful, to say nothing of its palatableness in coffee and tea, puddings and pies. It was once supposed to be a *luxury*, merely, but that time has gone by, and the common opinion now is, that it is one of the necessities of life.

We are glad to see attention turned to its production in the free States. Illinois produced it in large quantity the last season, and is undoubtedly capable of securing quadruple the amount it has already made.

Speaking of the cultivation of sugar cane (Sorghum,) in the Northwestern States, the *Chicago Tribune* says: "Next to the cotton crop, there is no agricultural product that at present more certainly demands the attention of our government, as well as the tillers of the soil."

AN AGRICULTURAL MISSIONARY.—The *Journal d'Agriculture Pratique*, which we receive regularly from Paris, states that an agricultural society in Prussia has appointed a person to visit the agricultural districts, make himself acquainted with leading men as well as farmers, and gather information on every subject in connection with the details of farming. This is a step in the right direction, and one that may be imitated with profit, we think, by every agricultural society in New England.

LOOK OUT FOR SHRUBBERY AND FRUIT TREES.—The crust that now lies upon the snow will be quite likely to break down a great deal of shrubbery and the lower limbs of pear trees, unless some pains is taken to prevent it. It now adheres very closely to many branches, and as the snow melts (for it melts from below as well as from above) it will drag the branches down and break them. We saw one half of a beautiful pear tree taken off in this way two winters ago. The trees should be visited, and with a shovel, or by some other means, the crust should be broken and removed from the limbs. It is a nice operation, and a careful hand should attend to it.

CURE FOR DYSPEPSIA.—A Philadelphia gentleman states that, "in a fit of despondency—I resolved to try bran bread and good sweet milk. I carried my resolution into effect, and the happy result is, that I am now perfectly well. I have regained my flesh and strength. I sleep as soundly as a rock, and feel as happy as a lark, under this new state of affairs." He takes but one cup of coffee, eats few vegetables, and eschews pastry and puddings.

SWORE THREE TIMES BEFORE HE CROWED.—A little girl went to camp-meeting, and when she got home, she said the sisters in the various tents told her a good many things, and asked her questions about the Bible. On being pressed to state what they told her, she said one thing they told her was about Peter, "who swore three times before he crowed."

For the New England Farmer.

MAKING SUGAR.

MR. EDITOR:—There is no season of the year so profitable to the farmer as in the time of making sugar. Let an estimate be made, and see: In a good season a second growth maple will make about $4\frac{1}{2}$ pounds of sugar. Five hundred trees, at $4\frac{1}{2}$ pounds per tree, will give 2250 pounds, which at 10 cents per pound, would give \$225.

COST.—One man can tend 500 trees with ease, say,

One man 1 month.....	\$15.00
10 cords of wood, at \$3 per cord.....	30.00
Other necessary expenses.....	20.00
Total.....	\$65.00

which, deducted from the income, leaves \$160 as profit for one month's time.

I think my figures are not far from right. Every one that can tap a tree ought to do so, because we must be independent of all duties as far as possible. To make sugar you should have a good sap-house and a convenient wash-shed, an arch and a pan. Sap boiled in a pan makes 5 per cent. more sugar than sap boiled in a kettle, and saves $12\frac{1}{2}$ per cent. of wood. The syrup should be boiled as thick as it can be conveniently, and when done down to sugar, it should not be very dry; put it in a tin can made for the purpose, and then drain about the first of May, when you will have maple sugar of the first quality. Tin buckets cost too much to commence with; they are liable to get bruised and cannot be kept from rusting. Bucket-pails are just as good, with half the cost, and last just as long. JOSEPH E. WHITE.

Wallingford, February 10, 1862.

STEEPING BARLEY BEFORE SOWING.—A writer in the *Homestead* recommends that seed barley should be steeped before sowing in a solution of copperas or blue vitrol, the same as is often done for wheat, and then rolled in plaster enough to dry it. He says it has the effect of giving it a rapid start, and makes it come up strong and dark colored. He thinks the benefit equal to ten extra loads of manure per acre.

LEGISLATIVE AGRICULTURAL SOCIETY.

REPORTED FOR THE FARMER BY D. W. LOTHROP.

The sixth meeting of the series was held on Monday evening last, at the Representatives' Hall, when the subject for discussion was *Farm Buildings*. The Hon. SIMON BROWN, editor of the *New England Farmer*, was invited to preside.

The chairman thanked the gentlemen for the position, but said he was not fully prepared to discuss the matter. Few things were more important on a farm than the kind and *location* of farm buildings. Buildings should be located as near the centre of the land as practicable, and not many rods apart, where it could be done without too great sacrifices. Where they are already located, we must make the best of it. Some farmers object to this congregation of buildings, as increasing the danger from fire; but the speaker thought this a minor consideration. Others object to the odors from barns by their close proximity to the dwelling. But these can be prevented or overcome by the proper use of muck and other materials as absorbents. Mr. Brown here showed a diagram exhibiting the position of farm buildings as he would have them. They would be attached—first the house, then the kitchen or dairy-room, wood-shed, and carriage-house, following on, and then the barn. The loss in an *extra* and unnecessary travel of *six rods* each time of going to the barn, for 40 years, going and returning ten times each day, would be 5,480 miles, or about 137 miles annually.

Another point in regard to farm buildings—and one heretofore greatly overlooked—is the want of *shelter* for them. If they stand out, in a bleak and dreary landscape, they are seriously affected by the elements that work upon them, viz: the sun, wind, hail and snow. The effect of the sun upon wood-work—where its rays are not softened by a screen of some kind—is quite destructive. The shingles on most of our roofs show it, and the warping of outer boarding may be traced to the same cause. In an unprotected house, the wind is pressed through every opening, bringing cold and dampness, and making an additional cost to keep the room comfortably warm. It is thought that good shingles would scarcely wear away in less than fifty years, provided they could be kept precisely in place all the time—while under the combination of the sun, wind and rain, they hardly last one-third of that time. These effects would be greatly modified, if buildings were partially protected by the presence of trees in their vicinity. It requires but a narrow belt of evergreens to form a complete barrier against the wind. The hemlock is an admirable tree for this purpose. A breadth of ten feet set with that tree or with the Norway spruce alternating, effectually shuts out the winds. The white pine, also, so common

among us, is hardy, easily removed, and is as graceful and handsome as the hemlock or spruce. These evergreens are not valuable merely for their beauty of form or the protection which they afford, but partly for the soothing sounds that come from them on a summer night, like the coming and retreating waves on a far-off sea-shore—or the grander music of winter winds through their branches, swelling into sublime anthems of atmospheric power. If they are interspersed with the rock-maple, the graceful white birch, the moosewood or sumac, the effect will be still more pleasing.

The south should be left open. This aspect has few high winds, and the windows looking out upon it may be sufficiently protected from summer suns by a few climbing plants, such as the *Prairie Queen*, or *Baltimore Belle Roses*, the *Scarlet, Yellow Monthly*, or the *Red* or *White Tartarian Honeysuckle*, *Chinese Wistaria*, or other climbing plants.

From the foot of these should be a green, well-kept lawn, if it be but twenty feet square, where the children can take their little friends and have a frolic.

In conclusion, he hoped farmers will listen more frequently to the promptings of a refined taste, and do more about their homes with reference to *beauty* as well as utility. They will have a happy influence upon the mind, habits and character; will light up the home with sweet affections, and shed a fragrance over all its duties.

Hon. ALBERT FEARING, of Hingham, being called upon, said he might not be able to throw much light upon the subject, but he thought our farmers should cultivate three things—convenience, economy and beauty. He lived in a house built in 1698, but it was conveniently arranged and good for a farmer. He spoke of barns, and mentioned one of his own, which was 40 by 60 feet; but he wished to speak particularly of sheep barns. Too little attention, he thought, had been paid to sheep. There should be only 25 or 30 in a flock, and they should be kept warm and dry. He described a barn of his for this purpose—20 by 40 feet—and observed that the hay should be where the sheep are, the pens six feet high, and alleys for them on each end. In his, the hay comes from the centre, and there are places for 30 sheep on each side. He also made other statements respecting it, and said it cost \$400. He had another barn for sheep and cattle, with a cellar under it, and sheep sheds connected therewith, which he thought not good economy to paint. Also, another one facing the west, 60 by 40 feet, nearly in the centre of thirty-five acres. The cellar is eight feet deep, stoned with granite, and admits of entrance with a cart; it cost from \$5000 to \$6000, and would admit three standing loads of hay

on the floor. He spoke of tool-houses ; said all his buildings were painted in front ; thought cattle preferred soft water ; has not lost any animals ; keeps his yards dry ; also his pig-pens, and lets his hogs come out into the sun, which they need ; they are healthy, and eat well. If he should change the structure of his buildings, they would be a little lower, with common sheds for sheep between them. We must show the young man that farming can be made profitable, and he thought that sheep culture could be made so, on our poor lands, and those just cleared of wood.

Hon. J. W. PROCTOR, of Danvers, being invited to speak, said he hoped to hear from some of the legislature, as this was their meeting. He alluded to the costly barns which had been spoken of, and said we should inquire what should be the buildings of the smaller and less wealthy farmers. He was on a committee in Essex county, to examine barns, and they found a great want of proper arrangement in their structure. Many were too long, and not sufficiently high. Gen. Sutton had four barns a quarter of a mile from each other, and cut from 100 to 200 acres of hay. Mr. P. thought that barns should be from 70 to 80 feet long and 40 feet wide, being so arranged as to drive in ten feet above and throw the hay down. He alluded to Mr. Newhall, who took a premium for the best barn. The prevalent rage for barn-cellars he deprecated, and said they were not good for the cattle above them, nor necessary for the manufacture or preservation of manure. As to large houses for farmers, he objected to them, but commended cottages, and advised farmers not to waste their money in large buildings.

Mr. BROWN, the chairman, said he thought large houses necessary sometimes—more especially for farmers' clubs.

Mr. CROSBY, of Boston, said he had travelled much, and had owned a farm of 1100 acres ; and thought the rule should be, a large barn and small house.

Dr. LORING, of Salem, spoke of barns. A man's taste will guide him as to his house—not so as to his barn. The latter is not an easy thing to build, and he doubted whether there was a model one in the Commonwealth, though there were many very convenient ones. In fact, our farmers cannot afford to build such. He once visited Mr. Leavitt, of Great Barrington, who resided much of his time in New York, but had sent his son into the country to become a farmer, and the young man thought he must have a good barn. He commenced it, but before it got above the foundations, \$40,000 were spent. Dr. L. intimated it was a caution. His own barn was 100 feet long, and 40 feet wide ; would hold forty cattle and ten horses. Barns should have good cellars, glass windows, &c., and should be convenient for cattle and men,

with good facilities for feeding. They should hold large quantities of hay, and he thought well of the old-fashioned barn, where you could drive into one end and out of the other. He alluded to storing hay ; thought the platform difficult to load ; shifted his timbers on the beams. He ties his cattle with chains, and where they steal from each other, he divides their heads. Chains are easy to cattle, but to an extent troublesome. To give more room behind cattle, he thought 42 feet wide would be better. As to cellars, with proper construction and ventilation of the barn, they are not injurious, but are important in the making of manure. Frost is as injurious to manure as the sun. Dr. L. advocated tight barns in this connection, and said the best hay was from them. He also spoke at some length upon the reported assertion of Mr. Chenery, that the cattle disease, or *pleuropneumonia*, was in his case caused by tight barns, and argued earnestly that, under the circumstances, it was impossible to be so.

Hon. JOSIAH QUINCY, Jr., said that in England and on the Continent they do not store their hay, but stack it and feed from the stack. With proper shelter for feeding cattle, he thought we might, to an extent, adopt the plan. His own barn is 70 by 90 feet. Barns that are high are good ventilators. He also alluded to the horse pitch-fork, and observed that with one the work of thirty-five minutes with the hand-fork could be done in seven. On a cold day he would not allow his cattle to come out, but gives them water from within, drawn from a flowing brook, which is always in operation both summer and winter. Mr. Quincy also alluded to his *milk well* into which he suspends milk, and finds no change in the seasons.

Mr. TAYLOR, of Montgomery, said he had a farm of his grandfather, the out-buildings of which were just as they happened. These he had improved. He thought the out-buildings in the villages were well kept, but in the towns of the country they were shocking. The spirit of improvement had been awakened in him by hearing a lecture upon this and kindred subjects, and he called up the painter. His buildings were rough, except the carriage house. But with a new kind of paint an acre of surface was painted for twenty dollars' worth of paint, and thought the improvement was a hundred per cent. He advocated housing carts, and said he had put up a building 18 by 24 feet for this purpose, at a cost of twenty-five or thirty dollars. Under such buildings carts will last twenty-five or thirty years. To a question by the chairman as to the nature of the paint used, its color, cost, &c., he said the base was whiting, with perhaps a little lime and oil, with colors to suit. The cost of what he used was about \$20 ; but with *good* oil would have cost \$100 or \$120.

Mr. HOWARD said he had examined Gen. Sut-

ton's barns, which were for hay, and this he sold out at a great rate. They were tight, with cellars underneath in nearly all of them. It was strange he should sell his hay.

Mr. WETHERELL hoped barn cellars would be well considered, for he believed that they injured the grain and hay, and he had no doubt a miller could discover much injury to the grain. He advocated barns for cattle, and hay in stacks, and had his doubts as to large barns for the latter. He had heard of a hog-pen that cost \$2,000! Mr. W. also slightly touched upon a few other kindred matters before closing.

Mr. QUINCY rose to say that he turned his cattle out every day, probably excepting the severest weather.

Mr. PROCTOR said Mr. Sutton's stock barn was open on the north side; the manure is moved out.

Mr. MOODY, of Enfield, advocated barn cellars, and said his own did not affect the hay. In his stables he sows plaster.

The time for closing having now arrived, Mr. Wetherell moved that the *same subject* be retained for further discussion at the next meeting, which being assented to, the meeting *adjourned*.

For the New England Farmer.

HOW TO RAISE CALVES.

MR. EDITOR:—It is doubtless a very simple matter to raise a good calf, if you allow him to suck the cow six months or more, but except in cases of thorough bred stock, which will command fancy prices, this is too expensive for the majority of New England farmers, and is, in my opinion, a serious injury to the cow.

The opposite extreme of commencing to feed skimmed milk, when a calf is a few days old, I consider equally unprofitable, because good calves are seldom raised in this way, and we can purchase western cattle so cheaply that it does not pay to raise a poor animal, if, indeed, it does under any circumstances.

The object with most of us, I suppose, is, not to raise stock to any great extent specially for beef, for that can be done cheaper where land is worth less for other purposes, but to keep up our stock of cows and working oxen by raising our most promising calves, and to adapt these to our not always over-luxuriant pastures, in the point aimed at, while, at the same time, we must avoid dwarfing the animal to such an extent as to injure its constitution.

The greatest obstacle in the way of substituting skimmed milk, grain, &c., for new milk, is the liability to produce "scouring," and this is so difficult to avoid, that even S. Edwards Todd, with all his skill and experience, abandoned that method of raising calves, but after trying almost all ways and kinds of feed with various success, I have at last so far "learned the trade," that with good stock to begin upon, I think I can raise good, thrifty animals in nineteen cases out of twenty, without any scouring at all, and will give my method for the benefit of others.

I do not allow the calf to remain with the cow more than from twenty-four to forty-eight hours, because I think it easier teaching him to drink, and the cow is less likely to be uneasy. In teaching him to drink, I insert my fingers in his month and hold the kettle of milk with the other hand for one or two feedings, after which I have a place made to hold it from tipping over, and teach him gradually to take his mess without the finger. If the fingers are crowded into the mouth, sometimes he will refuse to suck them, to avoid which I prefer to begin upon them when lying down, patting and rubbing the head gently, which generally removes all fear. Perhaps I should say here that no *rough treatment* should be allowed, even if *provoking awkwardness is manifested*. The amount of milk given depends on the size of the calf, but two and one-half to three quarts will do for our common native cattle, which I gradually increase to four or five. I prefer to tie them, because it prevents them from sucking each other's ears,—is the first lesson in learning to lead—and they can then be watched separately to see the effect of their food, an important item, as I shall show presently. I feed entirely on new milk for two weeks, and then change *gradually* to skimmed milk two weeks longer, gradually increasing, but being *very careful to make no sudden change*. A little rowen is fed as soon as they will eat it, and a few oats or a little oil meal is sometimes added at five or six weeks, but I would not feed *much* meal until nine or ten weeks old.

While increasing the feed, I always *watch the excrements carefully*, and if at all too thin, give them a little salt pork sliced very thin (which they will swallow readily if put in their mouths and the head held up a few moments,) and diminish the feed. The milk should be continued until three or four months old, and then taken away gradually. I feed but twice a day, and consider this sufficient. Plenty of litter should be supplied, and a little wood ashes and yellow earth are, without doubt, beneficial, but not indispensable. I have heard scouring attributed to the saltpetre collected under old buildings, and that calves could not be raised in such places; but although neatness is quite important, plenty of litter will secure it almost anywhere.

You will perceive that the points which I consider most important are *gradual change of feed, careful watching, and no grain except oats or oil meal, and very little of that, until they are old enough to be able to bear heavy feed.*

WM. F. BASSETT.

Ashfield, February 13, 1862.

FINE WOOL.—Mr. SOLOMON BIXBY, of Warren, N. H., has sent us some beautiful samples of wool from his *Spanish Merino Sheep*. We have seldom seen any of finer quality. He says, "The Spanish Merino is a patient and docile animal, as well as hardy and prolific, bearing much confinement without injury to health. Accurate experiments show that this sheep requires only about two-thirds the fodder that it does for the large breeds. Their fleece is fine, and of good size, averaging about six pounds per head."

For the New England Farmer.

CATTLE BREEDS.

Among the topics introduced and discussed at our town and State agricultural meetings, during the winter season, few are of more importance or excite greater interest than those which relate to stock-raising and the various breeds of cattle. Judging, however, by the reports of the discussions as published in the newspapers, it is plain to see that, notwithstanding the testimony usually advanced to support the various theories proposed, much difference of opinion continues to prevail upon the subject.

This is to be regretted, inasmuch, speaking generally, where there is nothing certain established, there is no new light reflected. But, I apprehend the difficulty is not so much one of doubt, in a scientific point of view, as, that those circumstances which would tend to influence a theoretic result, are not taken into consideration. The truth is, the rearing of a big calf is too often held to be a fact of itself, independent of physiological conditions; and when the process of reasoning stops there, what is to be gained by further argument?

But, it is far from my wish to say anything to discourage the efforts everywhere making to diffuse a better knowledge of what is required to improve the breeds of cattle.

Discussions upon these and kindred topics are of the highest importance to the farmer; and the chief and only complaint that I would utter is, that too little weight is attached to the value of true scientific tests.

The time is not far distant, I trust, when the different States will become convinced of the importance of doing something to introduce the breed of cattle best adapted, or, rather suited, to their particular soil and climate.

The public treasury of any State need not be heavily taxed for such objects. Better would it be to educate the farmers by the cheaper method of establishing libraries, and courses of proper scientific instruction, trusting to individual enterprise for results.

Kentucky, by the introduction of the "Improved Durham" or Short-Horn breed of cattle, has greatly increased her agricultural wealth. It is the kind of stock exactly adapted to her rich pasture lands, and our markets are now largely supplied with beef from cattle grown in that State.

Massachusetts has experimented with several breeds of foreign stock, and great praise is due the public spirited legislators who had the wisdom to project and the skill and influence to put into practical operation, a scheme of such infinite worth to the agricultural interests of the "Old Commonwealth," as the State Farm.

But the question is not yet settled. The farmers of this State are still in doubt. Those in the western division give the preference to the Durham;—those of the central portion, to the Devon;—while those of the eastern choose the Alderney and the Native. Few like the Ayrshire.

The State Society has imported several bulls and heifers of this kind of stock, but they have not done well, and have failed to give entire satisfaction. The stock of Ayrshires imported expressly for a gentleman in Southboro', by Mr. Sanford Howard, were selected with great care, regardless of cost, and they are said to have done well; still, they are not altogether liked.

I think it is doubtful if this breed of cattle is well suited to our soil and climate. So far as my observation has extended, they are not a hardy race, and thrive only on extra feed. Their milking qualities are not much above the average of our native stock, and for the purposes of beef they are no better.

It was my purpose, when I began, to speak of cattle and breeds, independently of the opinions of mere stock fanciers; for it must be plain to every one, that to form a correct judgment as to the breed of cattle best suited to a particular locality, every circumstance, materially influencing their condition, must be taken into account.

The best and the most profitable of all, where hay and grain are cheap, is, without doubt, the Short-Horn.

Crossing the Short-Horn with the North Devon stock has been tried, and good results have been obtained; indeed, grades of this kind are held in high esteem both for their milking qualities and for their beef.

But there is danger of depreciation after a few generations, unless, as in all mixtures of the sort, the laws governing physiological science are strictly observed throughout. Breeding with the same bull for a series of years would change the type obtained at the start, or, technically speaking, according to the English, the progeny would "cry back."

What is usually called native stock can be greatly improved by crossing with foreign breeds of the better descriptions. The Short-Horns or the North Devons, depending, of course, upon the locality and soil, can be crossed with great advantage to those who cannot afford the cost and outlay for full bloods;—and, it is to be hoped, if such an experiment is thought well of by our farmers, that some systematic plan will be inaugurated, by which a distinct native breed, combining most of the desirable qualities of the approved foreign breeds, will be secured.

The plan adopted and pursued by the late Col. Jacques, in breeding the "Cream Pots," was generally approved by our stock growers, especially as it was claimed that he followed the rules which governed Mr. Collings in breeding for his celebrated Short-Horns. But, the Colonel did not live to perfect his breed, and there is now scarcely a trace left of it.

West Roxbury, 1862.

THE UMBRELLA.—The umbrella has been used from very remote antiquity, as it is evident from carvings and representations found among ancient ruins of Persia, Arabia and China. Nevertheless it was not used by men in England until during the last century, and it is said that Jonas Hanway, who died in 1786, was the first person who used an umbrella in the streets of London. Even at that late period a man carrying an umbrella was an object of ridicule, and excited the jeers of the people by his "effeminacy." Previous to the introduction of umbrellas, the hackney-coach was the shelter of unfortunate pedestrians who happened to be caught in a shower; but it was customary, after their introduction, to keep a single umbrella at each of the coffee-houses, which, in cases of emergency, was lent, together with a boy to carry it.



For the New England Farmer.

COOK'S SUGAR EVAPORATOR.

[Sugar-making, either of maple sap or Sorghum, has come to be a matter of much importance to many of our subscribers, and we feel desirous to furnish them with all the information upon the subject that comes to our knowledge. We therefore give place to the cut and description herewith presented.]

Among the most useful of late inventions is this simple contrivance for evaporating saccharine juices. Its construction is as follows:—

The Evaporating Pan is constructed of copper or galvanized sheet iron, with wooden sides, and so divided by ledges as to form a continuous transverse channel about five inches wide. The pan is placed upon a furnace made of cast iron and heavy sheet iron, and lined within with brick. It projects about six inches over the sides of the furnace, to afford cool sides. The whole is mounted upon rockers of angle iron, thus giving a complete portable iron and brick furnace combined, and possessing all the advantages of either.

In operating, a stream of maple sap or cane juice is taken at the front end and passes back and forth through the transverse channel, and flows out at the lower end in a continuous stream of well defecated, finished syrup.

The mode of defecation is a beautifully philosophical one. The stream of juice passes across the heated centre of the pan, and comes to the cool side, when the scum rises and rests, being held there by the transverse ledge. It cannot follow the stream through the next channel, because the boiling at the centre repels it. The stream thus continues its course back and forth, depositing the impurities at the cool sides, where they rest until removed by skimmers. Thus, by the time the

stream is half through the pan, it is thoroughly defecated, and arrives at the lower, or finishing channels, in a pure state. Owing to its purity in the finishing state, the maple syrup and sugar made on this Evaporator are of a lighter color and richer flavor than have ever been made in any other way. No eggs, milk, lime or chemicals of any kind are used.

By the use of a running stream, a very shallow body of juice may be kept upon the Evaporator without danger of scorching, thus securing very rapid evaporation.

The object of the rockers is to regulate the flow of the stream to suit the fire, so that it shall reach the outlet just at the point of crystallization.

The use of the transverse channel, the projection of the pan over the furnace to secure a cool rest for the scum and motion in the pan to regulate the inclination, are each and all secured by patent to this Evaporator.

It is a great economiser of fuel, requiring only from one-half to three-fourths of a cord of wood to about 100 lbs. of sugar.

As a Sorgho Evaporator, it has no rival. Sorghum sugar was made upon it last fall *by the ton*. All the samples exhibited at the Illinois and Ohio State Sorghum conventions, last January, and all the samples yet exhibited in the Patent office, were made with it.

Pamphlets, &c., may be had on application to Blymyers, Bates & Day, Mansfield, Ohio.

TRANSPLANTING SHRUBBERY.—In transplanting native shrubbery, from the forest to the open lawn, or door yard, this precaution is necessary. Select your trees from as open and sunny an exposure as you can find. Mulch the surface after planting with saw-dust, spent tan-bark, chip manure, or something of the kind, and in very hot days, shade with boards or bushes.—*Ohio Farmer.*

For the New England Farmer.

RETROSPECTIVE NOTES.

CULTURE OF THE KOHL RABI.—On page 61 of the February number of this journal, will be found a brief article on the foregoing heading, in the closing sentence of which O. K., of Rochester, Mass., asks his brother farmers to send to the *New England Farmer* their experience in the culture and use of this plant.

In compliance with this request, I propose to state some of the more important items of my knowledge concerning it, partly obtained from a brief experience with it, and partly gleaned in the course of researches made in several quarters previously to making my first attempt in raising it.

It is to be desired that the request of O. K. for information in regard to the culture and use of the kohlrabi should be responded to by all the readers of this journal who have had experience with it, as in the more common books of reference—ALLEN's *American Farm Book*, for example—there is not a word of information to be found in regard to it. Nor need this be wondered at, for it is only a few years ago that it first received attention in this country; and only in 1857, that the attention of English farmers was first directed to it as a field crop or substitute for turnips. This was in consequence of a partial failure of the turnip crop in several counties of England about that time; but it was not until 1847 that there was any testimony in its favor which seems to have commanded much attention. In that year, a Mr. Davis stated that he had been very successful, for some years, in raising large crops of this plant, even upon poor soils, and commended it as superior to Swedish and common white turnips, of both of which there had been again a pretty extensive failure in consequence of a long-continued drought. Even in England, so far as can be ascertained from statistical accounts of crops there raised, this plant is not yet extensively grown, but from the most recent accounts it seems certain that it is beginning to receive increased attention as a farm crop.

One recommendation of this plant is that it is in some respects better adapted to succeed in our dry climate and hot summers, than the turnip. The author of the "Cyclopedia of Practical Agriculture,"—a work of the highest authority,—says: "Kohl rabi is the *bulb of dry summers*; heat and drought are congenial to it, and experience has proved that this plant grows, prospers and yields an enormous crop, under circumstances wherein white turnips and Swedes could barely exist."

Another recommendation of this plant is, that it stands the cold of our winters much better than white turnips, and better, even, than Swedes, or, as called among us, ruta bagas. The *Cultivator*, (Albany,) of 1858, quoting from the *Irish Farmer's Gazette*, says:—"The Kohl rabi is proposed as a substitute for the turnip, as it presents us all the qualities required for this purpose. It is perfectly hardy, and will stand severe frosts better, and keep in store for a longer period than the Swedish turnip. It also resists the attacks of the fly and the grub." Mr. L. Norris, of Ashtabula Co., Ohio, also bears testimony to the same effect, in said volume of the *Cultivator*, saying of the green-stemmed, or late green variety, which he got from Canada: "This rare vegetable is sweeter,

more nutritious and more solid than the turnip; produces a greater weight per acre; it is also *hardier*, and *keeps better than any other bulb*." Mr. N. says he has grown specimens weighing 14½ pounds. Mr. Harris, editor of the *Genesee Farmer*, says it has been found hardier than the Swede, and "is quite unaffected by frost, even with the thermometer 10° below the freezing point." We have usually buried it like potatoes, and found it always good in spring.

Another recommendation of this bulb or root is, that it produces a greater weight per acre than turnips. A fair average crop of this plant, in Scotland, is 25 tons of bulbs to the acre, and about 8 tons of leaves. These tops are larger and better than those of turnips for feeding to stock, resembling small cabbage leaves. Our cows have eaten them greedily.

As to the *culture* of this crop, it is found to grow on any soil fit for turnips. I have found it do well on a clayey loam. As it requires about six months to come to maturity, it *must* be sown *early*. When sown in June, I have found the crop quite small. The cultivation is the same as for turnips.

As to the *use* of this plant, it is said that all kinds of stock are fond of it. We know that cows certainly are; and for them I think it much better than turnips, and nearly equal to cabbage. It gives no turnip taste to the milk. Try a little of it, and sow early.

MORE ANON.

For the New England Farmer.

FEEDING CALVES.

MR. EDITOR:—I noticed in your last a receipt, how to raise calves. Mr. Bassett says it will not answer to feed any kind of grain to young calves, excepting oats or oil meal. I think he is mistaken. I think any kind of meal can be fed to young calves to a good effect. I do not pretend that a large quantity of raw Indian meal should be given to a young calf; reason would teach a man better than this. I have raised quite a number of calves myself.

In the spring of 1859, I raised thirteen calves, and all the milk they had was what two ordinary cows gave. I fed them on Indian meal and boiled potatoes. I put the meal into a kettle of water and boil it very thin, for one hour or more, until it comes to a kind of jelly, and boil a sufficient quantity of each to last two or three days. I give each calf four or five potatoes, well mashed up with what meal I think the calf will bear; turn the milk on them, and stir them well together. In teaching them to drink, I put two fingers in their mouth, leaving a space between them, so that at each draft they can draw what they would naturally want to swallow. I keep a tub of clean water and a box of salt, where they can help themselves. My calves are as good in the fall as my neighbors' are, that suck twice a day until they go away from the cow.

H.

Groton, N. H., March 3, 1862.

THE HORTICULTURIST.—The March number of this popular journal is illustrated with a beautiful engraving of the *Adirondack Grape*, and contains many excellent articles on horticultural subjects.

For the New England Farmer.

THE MANUFACTURE OF BRANDY AND SUGAR FROM BEETS.

MR. EDITOR:—Some two years ago, you published an article of mine in the *Farmer*, on this subject, which drew out considerable inquiry from different sections of the country; and as the war, and consequently the new tariff bill, will enhance the price of these articles considerably, I beg leave again to trouble you with a few additional remarks on the same important subject.

It is a well known fact, that in France and other parts of Europe, the distillation of brandy and the manufacture of sugar from beets has been prosecuted on a large scale for many years; and that the profits to the distillers, especially, have been enormous; and that many large fortunes have been made, in an incredibly short time, by those embarked in that branch of business, as the statistics of France do testify. Now when we learn from our own statistics what an immense sum is annually paid by this country to France, for beet brandy, of a very inferior quality, those farmers experienced in the cultivation of that root are often led to wonder why we cannot manufacture our own brandy, and by so doing create a demand for our produce, by keeping that large amount of money at home.

That wonder is still increased when we find that under proper cultivation we can produce fully one-third more of the raw material, per acre, in many portions of New England, than they can do in the most favored provinces of Europe, and of decidedly better quality. Three bushels of beets raised in the vicinity of Boston will produce as much saccharine juice as five bushels raised in the vicinity of Paris.

This may appear somewhat paradoxical to the casual observer, but the matter has been tested by actual experiments, and beet-growers of France admit the fact, as can be seen in some of their agricultural reports. Such is the peculiar adaptation of much of the soil of this State—at least to the production of beets—that it is justly said to be the only crop that the farmer can raise that has no hidden or secret enemies to contend with. Neither maggot nor mildew, nor any of the endless varieties of insects that infest and often destroy other crops, has as yet interfered with the beet in the smallest degree. Thus it would appear that the cultivation of beets in this country can be entered upon with some sort of certainty as to the final results; whereas most other crops are liable to numerous contingencies even in the most favored portions of this frugal land. Seeing, therefore, that such is the case, and that the present unfortunate war may make it both difficult and expensive to obtain these articles from abroad, we ought to manufacture them at home, in order to be as independent of foreign aid as possible. The first Napoleon, as a measure of necessity, as well as good policy, introduced the manufacture of sugar from beets many years ago into France; and up to the present time, that great nation has supplied itself with the very best quality of that article for domestic consumption, and could have had a large surplus for export had not some foolish legislative enactment of the government retarded its progress. The amount of revenue that France derives from the exportation

of beet brandy to different parts of the world is too well known to the intelligent statistical reader to require any comment in this article; and the people of the United States ought to learn wisdom from such a source.

Farmers are often heard to complain for want of a market for their produce, and yet pay away their hard-earned money to foreign countries for what ought to be, and easily can be, raised on their own farms. Judging from the signs of the times, however, at no very remote period, we may, like Napoleon the First, of France, be compelled, by stern necessity to manufacture our own sugar, or go without sweetening. Beets can be raised profitably by our farmers at eight dollars per ton, and two tons make thirty-two gallons of double distilled brandy of far superior quality to what is generally to be found in most of the fashionable hotels and drinking establishments in our large cities. Now let those acquainted with the price of foreign liquors calculate the prospective profit, seeing the expense of the raw material and manufacture is inconsiderable. From ten to twelve bushels of the proper variety of beets, one hundred weight of the best quality of sugar can be produced; and any one acquainted with the simple process of making maple sugar can do it, and the utensils required can be got at small cost. Having had practical experience in the manufacture of both articles from childhood, (I may say,) I can state with confidence that fortunes can be made from this branch of business, could people of adequate capital be induced to take hold of it. Were it not for encroaching too much on the space of your valuable paper, I should have said much more on the subject, but you may hear from me again.

THOMAS CRUICKSHANK.

Beverly Farms, Feb. 12, 1862.

REMARKS.—Our correspondent states above, that “from ten to twelve bushels of the proper variety of beets, one hundred weight of the best quality of sugar can be obtained.” This result is so much more favorable than we had supposed it could be, that it led us to look at some books at hand. In the “*New American Encyclopedia*,” it is stated, that “five tons of clean roots produce about four and a half hundred weight of coarse sugar, which gives about 160 pounds of double-refined sugar and 60 pounds of inferior lump sugar; the rest is molasses, from which spirits of good quality are distilled.”

For the New England Farmer.

WOOL-GROWING IN VERMONT.

At a meeting of the Directors of the Vermont State Agricultural Society held at Bellows Falls, Feb. 12th, the Hon. H. Henry Baxter having declined the office of President, on motion of the Hon. J. W. Colburn, the Hon. Edwin Hammond, of Middlebury, was unanimously elected President for the ensuing year.

The following preamble and resolutions were adopted:

Whereas, harmony and concert of action among wool-growers, is as important as among members of other occupations; and whereas, great losses

occurred to the people of our State, the last year, from the failure to appreciate the real value of wool and the condition of the wool market; and whereas, there is a question interesting alike to producer and manufacturer as to the manner of preparing wool for the market; therefore,

Resolved, That for the purpose of discussing these and other questions important to the wool-growers of the State, and for the purpose of aiding in the reaching of reliable conclusions with regard to these matters, we recommend the holding of a **WOOL-GROWERS' CONVENTION** in this State, some time during the present year.

Resolved, that the Secretary be requested to call such a Convention, to be held under the auspices of the Vermont State Agricultural Society at Rutland, on the afternoon of the ninth day of September next; said day being the first day of the annual Fair of our Society.

DANIEL NEEDHAM,

Secretary Vermont State Agricultural Society.

For the New England Farmer.

TIMELY ADVICE TO A BROTHER FARMER.

MR. EDITOR:—The *New England Farmer*, which is always a welcome guest in my family every Saturday evening, has just been laid aside for the pen, in order, if possible, to answer some of the inquiries of your correspondent, "Hampshire," concerning "What shall I raise, or how shall I make farming profitable, in these times?" I feel more constrained to converse with him on account of the noble stand he has taken not to cultivate the filthy weed, tobacco. And I extend to him the right hand of fellowship, believing, as I do, that the raising of that which does not tend to cultivate neatness and good breeding in society, does not constitute true farming.

True farming does not consist in placing too much value upon dollars and cents, but rather in returning, in some manner, to the soil, the crops taken therefrom. Better that any farmer should return to his farm all proceeds of it, rather than to lay up money in banks, or invest it in any other way. Then why is not this as good a time for the farmer as any? If a farmer begins by laying out the proceeds of his farm in some way upon his farm, it will some time return to him the interest, and I am very firm in the opinion that it will return a dividend also. By a continuance in so doing, he will, by the natural increase of his income, be enabled more extensively and scientifically to cultivate his farm, as each succeeding year he reaps the reward of his husbandry.

What should we say of the merchant, who should lay up in some safe place, every dollar he chanced to make, instead of laying it out to replenish his stock, and thereby make his business more prosperous, as well as more profitable. If this is the true course for the merchant, then why not for the farmer? And when he has enriched, beautified and ornamented the farm he now occupies from the resources of the farm itself, which I believe is possible, then let him extend the area of his farm, and continue the true cultivation of the earth while his strength of body and mind permit.

Here let me again say to your correspondent that I truly congratulate him in the stand he has

so nobly taken, and I take it for granted that he is one of those firm, resolute, whole-souled men, who will withstand the temptations of those around him.

Let us, then, not judge of farming, as concerning dollars and cents, but rather in returning to the farm all we can make it produce, to increase its fertility and value, thereby making farming profitable always.

WORCESTER.

Feb. 8, 1862.

For the New England Farmer.

COE'S SUPERPHOSPHATE.

Having seen a communication in the *N. E. Farmer* of Dec. 21st, signed by S. L. White, South Groton, in which he speaks about using Coe's superphosphate of lime without much, if any success, I would say that I have used it for several years with very satisfactory results to myself. In the fall of 1860, in harvesting my corn, I found I had by measure one-third more of corn where lime was used in the hill, than where none was used; this year the odds was not as much, but nearly as follows:

The piece I have just harvested measures 5 $\frac{1}{2}$ acres, very nearly, on which I raised 740 bushel baskets of ears of corn, as bright and yellow as any one could wish to see, which is a little over 64 bushels to the acre. In June, 1859, I plowed and planted the piece with potatoes, corn, ruta bagas, &c., with scarcely any manure. I put plaster in the hill and had as good a crop as could be expected. In the spring of 1860 I sowed the same piece with oats, and had a very bountiful crop, without any further manuring. As soon after the oats were gathered as I could attend to it, I had the stubble plowed under; in the spring of 1861 I spread on about 30 ox-loads, of 30 to 25 bushels each, of manure to the acre, and plowed it well, (for I don't approve of half-plowing.) On the two last days of May I planted it, putting in the hill one table-spoonful of plaster and lime mixed together about half and half; I left two rows without anything in the hill. In two rows alongside of these I used a single handful of wheat bran to the hill, and two other rows alongside, I used one spoonful of clear phosphate of lime in the hill, and the result was as follows:

Clear lime to the row.....	17 bushels of ears.
Bran.....	16 " "
Lime and plaster.....	15 " "
Nothing.....	15 " "

The rows were about 220 hills long. The corn where nothing was used was not near as sound and good as any of the rest, the clear phosphate being the best. I think the corn was enough better where the phosphate and bran were used, to pay all the expense, even if there had been no more bushels. In using the bran, or clear phosphate, there should be some dirt kicked on before dropping the corn. I shelled four baskets of my corn and got two bushels and two quarts. It is the twelve-rowed variety. I do not think, nor expect, the phosphate will answer in the place of manure, but merely as a stimulant.

L. C. FRENCH, 2D.

Bedford, N. H., Dec. 30, 1861.

P. S.—I forgot to say that I can find a good many ears of corn among mine that have over 800 kernels to the ear.

L. C. F.

For the New England Farmer.

COST OF ROOTS.

MR. EDITOR:—I noticed through your paper that at the discussion at the State House, the question was asked as to the cost of roots, and as no one seemed to know, I will give you the details for their benefit.

On the 24th of May I sowed a piece of land with mangel wurtzel; last year the crop was Hungarian grass and weeds—full as much of the latter as of grass. I turned the stubble in early, and spread at the rate of 40 loads of good manure to the acre. Last spring it was plowed and cultivated, drilled, and four horse-cart loads of compost manure to an eighth of an acre was put in the drills. The drills were three feet apart and plants nine inches. One-eighth of an acre was kept separate, and weighed. Now for the cost:

5 loads of manure, at \$1.25 per load, $\frac{1}{2}$ spent.....	\$3.12
M in and horse plowing and cultivating.....	30
2 loads put in drills, \$2.00, $\frac{1}{2}$ spent.....	1.00
Drilling.....	25
Planting.....	25
Cultivating 3 times.....	15
Following with hoe, $1\frac{1}{2}$ hours each time.....	67
Gathering and housing.....	1.50

Total.....\$7.24

Total weight of roots 8035 pounds, equal to 4 tons, or 42 tons to the acre, worth \$8 per ton.....\$32.00

Balance in favor of roots.....\$25.76

Or to the ton.....\$6.44

About the first of August we began to gather the lower leaves, and before the fifth of September one ton was gathered, and one ton more when harvested. Full a ton was allowed to go to waste. I think, with proper care, the top can be made to pay for cultivating and manure spent. The ground is left in much better condition than found. One-eighth of an acre of carrots cost four times more to cultivate, and produced only about twenty-two tons. I have raised both kinds for several years, with result similar to the above. The mangels can be cultivated at less expense than corn, they shade the ground so soon. L. W. CURTIS.

Globe Village, Feb. 5, 1862.

NEW PUBLICATIONS.

THE HISTORY OF HAVERHILL, MASSACHUSETTS, from its First Settlement in 1640, to the year 1860. By GEORGE WINGATE CHASE. Haverhill: Published by the Author.

This is an exceedingly interesting book. Beside the minute details of the settlement of the town itself, the author has introduced many pages of the most interesting historical facts, though all tending to illustrate his principal topic. The true character of the Aborigines of New England is little understood by our people. They have general credit for a heroic daring and purity of purpose, which, in our mind, is not justified by the record of their deeds which has come down to us. Mr. CHASE says,—“The aboriginal inhabitants of New England held a low place in the scale of humanity. They had no civil government, no religion, no letters, no history, no music, no poetry. The French rightly named them, *Les Hommes des Bois*,—“Men Brutes of the Forest.” He gives a search-

ing analysis of their character, which certainly robs it—and justly, too—of that stern purity which has so long been accorded to them, and declares that “in constitution of body and mind, they were far below the negro race.” The book is handsomely printed, and illustrated with upwards of twenty maps, views, plans and portraits of distinguished persons. A copy of this history should be in every town library of the State.

EXTRACTS AND REPLIES.

MANURING—SEEDING—BEST TURNIP—PRUNING GRAPE VINES—OYSTER SHELL LIME, ETC.

1. In the spring, I think of turning over a piece of greensward for planting corn and potatoes. Is it the best way to spread manure on the grass and then turn over the sward, or turn the sward and then spread manure on top and harrow or cultivator it in, or is some other way better than either?

2. In seeding ordinary planting land to grass, how many bushels of oats is enough per acre, or would it be better not to sow any?

3. Would Rhode Island Bent seed be any better to seed land with that is heavy, than any other kind, and how many bushels is “enough per acre?”

4. I wish to know the best, sweetest and most profitable kind of turnip to raise for the table. I do not mean flat turnip.

5. When is the best time to prune grape vines?

6. Can oyster shell lime be bought now in Boston or vicinity, and if so, at what price per bbl.?

7. I have a mare that has been lame by spells, for about two months and a half, sometimes quite lame for a while, and at other times not so much so; I have tried quite a number of remedies that others have recommended without much real good; at last, I thought I would try Arabian Balsam. I should have said before that the trouble appears some like the “scratches.” It is in the pastern joint of the fore leg. The flesh cracks, and the edges of the cracks are hard and sore; there has been fever in the foot and joint, I think. I pour the balsam into the cracks once or twice a day; after a few days it will heal, then I stop using balsam, and use the mare, and then the flesh cracks again. Can you tell me a remedy?

Wrentham, Feb. 10, 1862. A SUBSCRIBER.

REMARKS.—1. Opinions and practices are divided on this point. Some of the best farmers in New England always practice the former mode, while others, equally as good, pursue the latter course, and each has reasons in favor of his own peculiar mode. We have tried both ways, and prefer to plow first, then make the manure as *fine as we can*—and should be glad to have it as fine as corn meal if we could, profitably—work it under one or two inches, strike out the field into squares, and add some quickener to the hill, such as hen compost, superphosphate of lime, American guano, night-soil compost, or some warming and quickening stimulant that will push the crop along in the early part of the season. Whatever this stimulant is, it should be scattered over a space 8 or

10 inches square, and be thoroughly mixed with the soil.

2. Farmers, such as we have spoken of above, vary in their practice, sowing all the way from one bushel and a half to three bushels per acre. There is no well-settled rule about it. If the oats are to ripen and be harvested for their seed, a less quantity may answer than if they are to be cut green for fodder.

3. It is not the practice to seed land with redtop, or "Bent Grass," alone. Four quarts of timothy, three or four pecks of redtop and 8 or 10 pounds of clover seed, make a judicious seeding for an acre.

4. The Sweet German.

5. Prune grape vines in November.

6. Oyster shell lime may be purchased of Mr. James Gould, Boston, at 50 cts. per cask.

7. Keep the parts affected perfectly clean whenever the mare is not at work, and rub with some soft, clean oil, and give her two table spoonfuls of Epsom salts twice in the course of eight days.

SHAPING THE HORNS OF STEERS.

Mr. Clark Hill wishes to know how to match steers' horns. The position of horns may be changed by scraping them. If it is desired to turn the horn up, scrape on the under side; if to turn the horn out, scrape on the inside, and *vice versa*—as that side of the horn scraped grows faster than the other, thereby changing the course or direction of the horns. But this is a slow process, and I will give you a more effectual method of matching steers' horns. You may be aware that horns, when young and growing fast, are tender, and may be turned in almost any direction by gently pulling them. Now, then, take a ball and screw on to the horn tight; then take a small pulley, make it fast over the head in the direction you wish to turn in the horn; then take a small cord, make it fast to the horn, pass it over the pulley, and tie on a weight; taking care not to put on too much weight, which would turn the horn too short. About the weight of a brick is sufficient for a two-years old steer. Whenever he is put into the barn, hitch on the cord and let the weight be pulling, and in the course of two or three months there will be a decided change in the position of the horn. C.

Groton, N. H., 1862.

REMARKS.—N. S. WATERMAN, Orange, Vt., suggests the same mode, and says that oiling the scraped portion will facilitate the process. Mr. J. M. FULLER, of Fairlee, Vt., gives the same direction.

PARSNIPS FOR COWS IN CERTAIN CASES.

I frequently hear of cows not doing well after calving. I have a cow that dropped her calf Feb. 3, but retained the after birth. I tried a number of things but to no effect, until the 7th, when one of my neighbors passing by, told me to give her four quarts of parsnips. I did so, and in less than twelve hours it was dropped. I have since

learned it had the same effect upon others. Many valuable cows have been lost and others ruined, by forcing the after birth away or by letting it rot. I was informed by the same person that one of his neighbors, in order to have his cows do well, gave them parsnips a number of weeks before their time was out, and the next morning he found they had dropt their calves. S. H. WHEELER.

Mason Centre, N. H., 1862.

COTTON CULTURE—BORDERS.

Will you please to state in your next number of the *Farmer* the *modus operandi* of the Cotton Culture? Having received seed from the Patent Office, I desire to know how to plant and care for the same; I have got the necessary improvements for starting the seed under glass, if it must be so.

Please state how to prepare the ground in borders for starting grape cuttings, rose cuttings, &c. SUBSCRIBER.

REMARKS.—In the Southern States, cotton seed is sown in rows commonly four to five feet apart, and eighteen inches apart in the rows. If the crop is kept clean and the soil light, it will be likely to flourish better. It ought to be sowed as early as it can be, and escape frost. Two or three plants in a hill or cluster, is enough. If the plant grows rank, when it is up two or three feet high, cut off the top, as is sometimes done with the tomato, and this will throw the growth into the pod, and sensibly increase it.

To prepare borders for grape cuttings, &c., make a deep, fine soil, to which add manure plentifully, and let a portion of it be slaughter-house manure. Dig this in deep, and until the whole—soil and manure—is thoroughly mixed.

RED OAK SAWDUST.

I am using red oak saw-dust to bed my cattle with, my muck being frozen, but my neighbors say I am all wrong, it being so sour it will spoil my manure, spoil my crops, spoil my land! Will you, or some of your correspondents, enlighten me upon the subject. I use lime and salt in my compost, and shall use the saw-dust until I learn something more about it. I used the ash saw-dust last winter with good effect. A. F.

West Baldwin, Me., 1862.

REMARKS.—We have no doubt that even the red oak sawdust is valuable, as you use it. Mixed gradually with the droppings of the cattle, or composted with lime and muck, it has considerable value in its mechanical effects upon the soil, as well as for its nutritive properties.

HOW TO SET FENCE POSTS.

Please to tell farmers who are so often inquiring how to set fence posts so as not to have them heave out by frost, to sharpen the end, make a hole with an iron bar, drive the post in, and it will stand fast for ever in any wet land.

East Burke, Vt., 1862.

S. WALTER.

For the New England Farmer.

FARMERS' CLUBS---A FORWARD MOVEMENT.

FRIEND FARMER:—I have recently been much interested in a forward movement by a Farmers' Club that I wot of, and which I think will greatly increase its usefulness. The Club was organized about ten years ago, and its members are wide-awake men, deeply interested in the improvement of themselves in knowledge of their business, and of their farms in productiveness; many of them hardly missing a meeting for the whole season, though obliged in some cases to travel, in inclement weather, from three to four miles from home. It has been the custom of this Club at the beginning of each winter to select questions for discussion and fix places for the meetings for every week during the season, and the programme is printed and a copy given to each member. The meetings are held at the houses of the members; the member at whose house they meet being expected to write an essay to be read as an introduction of the subject up for discussion that evening. These essays are supposed to embody the best thoughts and the ripest knowledge of the writers, the result of practical experience, and the study of books and of nature; and the discussions that have followed them have always been interesting, and often intensely so. The topics discussed are usually of a practical character, directly relating to the business of the farm; with occasionally one of a broader interest, whose practical bearings on farm management are not at first sight so direct and palpable.

It has recently been suggested that it was time for the Club to take a step forward; that it might be more profitable sometimes to introduce subjects that were not familiar to all—topics that will reward as well as require special investigation by the members—instead of permitting them to depend on their previous knowledge or experience for what they shall say. It was believed that all wanted to learn something that they did not already know; considering the Club a sort of school for mutual instruction, where every one is able to teach a little and learn a great deal. It has also been suggested that the interest in, and the fruits of our discussions would be greatly increased if the subjects to be talked and written about were selected and assigned a year beforehand, as opportunity would thus be given for special and more thorough investigation, by examination of common practices, and looking into the reasons for them, while performing the labor, by experiment in the fitting season, by a study of the experiences and theories of other men as recorded in books, and by careful study of the pages of Nature's great book as they are turned over for our perusal. Every member is supposed to be a thinking man, and to be desirous to come at facts and true theories; and is expected to be at all times wide-awake to observe, and free to criticise, in a kind and truth-seeking spirit, the opinions and practices of his neighbors as well as his own, believing that truth, though standing alone and unrecognized, is more worthy of regard than error, however venerable for age, or however highly or numerously patronised. By using this longer time for more thorough and exact investigation, the members expect to be enabled to winnow out

some chaff from among their opinions, leaving the good and reliable grain in a better condition to sow for another crop of valuable knowledge. It would seem that a company of men earnestly interested in questions having an important bearing on the general welfare, with these topics specially before them for thought and inquiry during a whole year, can hardly fail to bring out something that would be new to each individual, as well as establish on a firmer basis such of the old notions as may be found good. If in no other way useful, this plan, faithfully carried out, will surely tend to develop the spirit of inquiry, to give increased mental activity, promote the love of knowledge, and to some extent furnish the means of gratifying that love.

I have been induced, Mr. Editor, to offer you this statement, in the hope that other clubs may adopt the plan proposed, unless they already have one as good or better.

M. P.

Concord, Jan. 30, 1862.

For the New England Farmer.

AMERICAN GUANO.

MR. EDITOR:—"Patent" or "foreign" fertilizers have become quite an "institution" in the pursuit of agriculture. And when it is considered that the greatest problem which the farmer has been called upon to solve, has been, and still is, how shall the fertility of the farm be improved, or even kept up, without keeping a stock of cattle sufficiently large to consume all, or nearly all the hay and grain raised upon the farm, we shall readily understand why "extra" or "foreign" fertilizers have become as much a necessity, as the improved implements of husbandry, which enable us to accomplish double the amount of labor in less than half the time consumed in the use of the ruder implements of the past.

A large share of the farmer's resources have long been expended in producing means to keep as large a stock as possible through the winter, in order to make his manure heap as large as possible in the spring, whether the making of flesh or the products of the dairy gave an adequate return for the expenditure of the hay and grain, or not. Fields distant from the barn, and old pastures, have had to remain in their worn out condition, because the farmer has felt constrained to apply his manure to fields more convenient, requiring, as it would, even if he had barn manure to spare, a large outlay in labor to transport such heavy and bulky materials to more distant localities. But the introduction of "foreign" fertilizers has done much, and is destined to do far more, in the future, to advance this important interest of the farm.

The intelligent farmer finds that by a judicious application of some of these fertilizers, he can keep up, not only the fertility of his oft cultivated fields, but he can render fertile and productive lands which have long been of little value. With him, the question whether farmers can afford to purchase such manures, has been settled affirmatively. His only concern is to know *which* special fertilizer, among the many urged upon his attention, is most worthy of his patronage and confidence.

In the hope of aiding in the solution of this

question, Mr. Editor, permit me to state my own experience in the use of the American Company's "Jarvis Island Guano,"—a guano obtained from an island in the Pacific Ocean, whose deposits have the same origin as those at the Chincha Islands in Peru; the chief difference arising from the fact, that the former island is situated in the latitude of variable winds, which produce occasional rains, whereas the latter are within a belt of climate where rain is almost unknown. Peruvian guano is chiefly valuable for its *ammonia*, while the Jarvis Island guano is surpassing rich in phosphates—according to Prof. Hayes, of Boston, containing no less than an equivalent of 81 per cent.—an element of fertility which, above all others, our old fields and pastures are most deficient of.

I have used the American Company's guano for the last two years with marked success. My first trial of it was upon a half acre of old pasture—light sandy loam—sowed with oats and grass seed, it having been broken up and planted with potatoes the previous season, with no other manure than superphosphate in the hill—being too far from home to think of applying barn manure—and which had not been plowed or top-dressed for twenty-five years. I did not expect any other return from the oats, than a little feed for my young cattle; but they grew so well, and became so promising for a crop of grain, that I determined to let them mature. Before the grain got out of the milk, a portion became so badly lodged, that I was obliged to cut that portion in a green state, making a small horse load. The remainder of the half acre matured, and yielded twenty-one bushels, weighing thirty-four pounds to the bushel.

My second trial was upon ten rows of corn, through a field of three acres, evenly manured throughout with best barn manure, at the rate of eight cords to the acre; a small handful of the guano was applied to each hill in ten rows, making about twelve hundred hills. These ten rows presented a marked superiority throughout the season, and at harvest, upon careful measurement, yielded twenty per cent. more corn than the average of the rest of the field, besides maturing ten days earlier. My neighbors were often called during the season to witness its appearance. I have also used this guano as a top-dressing to old field grass with marked and profitable results. I have used it for peas with the most gratifying success. And as this guano is sold at about forty dollars per ton, I consider it the best and cheapest foreign fertilizer to be had, especially for pastures and old fields. It is richer in phosphates than any other article with which I am acquainted; and if its effects upon growing crops are not so striking or immediate as the Peruvian guano, I am persuaded that it will prove of more lasting benefit to almost any soil to which it may be applied.

Westboro', Jan., 1861.

T. A. SMITH.

REMARKS.—What Mr. Smith says above, corroborates what we have more than once stated as the results of our own experience in the use of *American guano*. We know him well, and his practices as a farmer. His farm is not managed by guess-work, but is conducted systematically, and so that he is able to give satisfactory reasons

for the results he objects. We believe that all persons may obtain results similar to those stated by Mr. Smith, if they use the guano as judiciously as he did.

For the New England Farmer.

BEDDING AND PLASTER IN STABLES.

I have just read a piece in your January number, signed "More Anon," on the use of plaster in stables, &c. I will tell you my plan, which I find is not only cheap, but I think as good as any other, viz: After cleaning out my stables, I have a half-bushel of sawdust, or a large shovelful of sand to each horse or cow, sprinkled over the stables. More does no harm, as it absorbs urine when the stock is put up again.

I prefer sawdust for horse bedding to anything I know of, and always lay in enough in fall and winter, to carry me through. I generally keep a thickness of six inches under my horses all the time, and find it is very little trouble to keep them clean, and the stables sweet. I see forest leaves recommended very highly for putting in yards, hog-pens, stables, &c., and have no doubt they are excellent.

WHITE AND PITCH PINE LEAVES.

Can you recommend the leaves of our common white and pitch pines for the same use? I have an almost inexhaustible supply of them near by my barn, but have not had faith to use them.

COE'S SUPERPHOSPHATE OF LIME.

I put Coe's superphosphate on three rows of corn through a piece last season at planting, and we could pick out the rows an eighth of a mile distant, from the time it came up until cutting stalks, and even after that. I also put it on some corn at the first hoeing, in alternate rows, where there had been no manure at all, and it did not show itself at all. I also tried it on alternate rows of potatoes on the same land, at the same time, and could see no effect whatever. I set out one-fourth acre of sweet German turnips about the middle of July on some old pasture land, and put a small handful of it in the hill, and had a fine lot of turnips, but a small piece was left without anything, and the turnips were not worth pulling. I intend trying it more definitely another year.

North Blackstone, 1862.

J. ALDRICH.

TIMOTHY GRASS IN SOUTHERN OHIO.—I have had about one hundred acres in grass on my farm, for the last twenty years, and testing its value in dollars and cents by a close calculation of weight, find Timothy to be the most profitable of all grasses. My cattle prefer it to any other grown in this climate. I find that every kind of stock that feeds on grass, works after the Timothy more than the other grasses, and they pull it up and destroy it, and other grasses and weeds take its place. I can cut my grass with a mowing machine, for fifty cents per acre; a good yield will average two tons per acre. Baling it costs \$1.50 per ton; the whole cost of preparing one acre of Timothy grass for market, is \$5.50 per acre. My crop of hay has sold, for the last three or four years, at the rate of \$15 and \$16 per ton; two tons per acre, shows a profit of \$24 per acre.—*W. D. Kelley, in Ohio Farmer.*

VERMIN ON CATTLE.



XEN and cows, and especially young cattle, are very liable to be attacked by vermin,—and unless care is taken to prevent their depredations, they will seriously impair the growth and productiveness of the stock. In the spring these exotics usually show themselves the most numerous, and for this reason we call especial attention to the matter now. Applications are annually made to us for some remedy

to destroy these pests, and among those suggested are,—

Any clean oil, applied to the skin and thoroughly rubbed over all the upper portions of the animal,—and particularly along the line of the back bone, between the horns and ears, and on the shoulders and neck. The reason for covering such large portions of the creature is, that lice *do not breathe through the mouth*, but through *breathing-holes or pores* in the body, and when they come in contact with oily substances, these pores are stopped, and they die.

Fine sand, or dry loam, carefully sifted over the animal, and frequently repeated, will greatly annoy vermin, and perhaps drive them from their places. It is probable that cattle paw the fresh earth and throw it upon themselves, for the same reason that fowls burrow in the ruts or the dry garden soil.

Ashes.—Some persons apply wood ashes, and it is good, but requires to be used with much care. If it is applied plentifully, and the animal is exposed to rain soon after, the ashes are leached, trickles down in ley, and takes off the hair as it passes.

Tobacco-water is also employed by many, and is frequently effectual. This may be purchased in a highly concentrated and convenient form.

Kerosene has been latterly used, and with success. If applied too freely, it seems to set the hair and partially tan the skin. Where it has been applied profusely, we have seen the old coat of hair remain on nearly through the summer, while the skin under it was hard and dry, and appeared to be inactive.

Yellow Snuff is often successfully applied.

Unguentum is a certain remedy, but is a dangerous one in unskilful hands. Its active property is probably quicksilver, (mercury,) and has a powerful influence upon the skin, rendering the animal liable to take cold upon exposure.

Spirits of Turpentine is another remedy, and is said to be a most effectual one. The mode of using it is to take a common wool card, and pass it over the animals until the teeth are pretty well choked with hair, then pour on a small quantity of spirits of turpentine, but sufficient to moisten the hair in the card, and again pass it over the animal's coat—applying the card first in places where the vermin “most do congregate.” In this way every insect will be compelled, almost immediately, to “vamoose.” The operation should be repeated in the course of three or four days, as newly-hatched lice may supply the place of their progenitors which have been destroyed or driven off by the first. As turpentine is of a very diffusive and penetrating nature, one wetting of the hair in the card will be sufficient to dress off an animal of ordinary size. This last remedy we give on the recommendation of others, and not as the result of our own experience.

DIELYTRA SPECTABILIS.

Probably nothing, among the hardy herbaceous plants, can excel in rare value and beauty the die-lytra. Hardy as a peony—which it resembles in its foliage—as soon as the frost is fairly out of the ground, it commences to push its tender and succulent shoots upward to the sunlight. It is a vigorous and fast grower, and almost as soon as its first delicate leaflets are fairly formed, the first slender blossom-buds appear to give promise of coming beauty. Planted in the border, with a good exposure, and in good company, or by itself on the lawn, (in either case in rich soil,) it will command the admiration of all who see it.

When properly cultivated, it begins to blossom in May, and continues in bloom during the greater part of summer; the plant usually attaining a height of about two feet. The flowers, which are of a peculiar and beautiful shape, and of a beautiful rose color, appear in long racemes, each flower-stalk drooping gracefully under its burden of pendulous blossoms—each blossom a perfect curiosity in itself, which will well repay a close examination.

This unique plant is of Chinese origin, and was introduced into England a few years since by Fortune. It has proved itself capable of withstanding our severe winters unprotected, but it is best to give it a slight covering in the early part of the winter, to ensure a vigorous start in the spring.—*The Homestead.*

TAPES IN POULTRY.—A writer in the *Country Gentleman* says he cures this disease in chickens by feeding them on food described as follows:

I take of cracked corn (chicken feed,) four quarts—four quarts coarse wheat bran—scald the meal and bran at the same time—add two table-spoonful of good wood ashes sifted, as also one table-spoonful of best ground black pepper. I feed my turkeys and chickens in the same way. I feed often, say once every three hours.

LEGISLATIVE AGRICULTURAL SOCIETY.

REPORTED FOR THE FARMER BY D. W. LOTHROP.

The seventh meeting of the series was held on Monday evening last, at the Representatives' Hall, when the subject for discussion was that of the previous meeting, namely, *Farm Buildings*.

Mr. STEDMAN, of the Committee on Agriculture, called the meeting to order, and observed, that though he did not intend to preside—expecting Mr. Davis, of Plymouth, to do so—he would occupy the chair till he came. Not desiring then to discuss the subject himself, he would call upon

Mr. WETHERELL, of Boston. Mr. W. spoke of the importance of the subject to farmers, of the necessity of a good farm-house, with proper out-buildings, convenient, tasty, and located near together. There was economy in this, not only for the farmer's own use, but also in letting them, if occasion required. The dwelling should be of a size convenient for the family, and should be tasty rather than costly—and so with the other buildings generally. They exert a happy influence upon the children, and the speaker contrasted those bred in a low thatched-roof cottage with those reared in dwellings of more architectural beauty. The former were apt to be but little above animals, while the latter were neat and intelligent. He thought the grounds around barns should be underdrained, as a point in neatness, and spoke of the evils of damp barns, and their evil influence upon sheep. He also alluded to the importance of the ventilation of barns; the strong scent of ammonia affecting the hay, though not always perceptible to those frequently in the buildings. The heat arising from the manure, also, he thought bad for the cattle, especially where occasional draughts of cold air were introduced. He advocated ventilation, but it should be at the top, and spoke of some improvements upon the old arrangements for this purpose. The milk, too, of cows without good air, he believed was much deteriorated. Barns for cattle should be only of medium warmth, as heat tends to weaken them. He spoke well of watering stock inside of the barn; the room they required, their position, &c. In regard to the disease of cattle being influenced by tight barns, he thought there was danger, and urged proper ventilation. Hay, in such barns, he again intimated, was injured, and he thought it well to keep this in one barn, and the cattle in another, with a railway, perhaps, between them for transporting it—laborious it might be, but he thought well of it. He could not favor barn cellars, as he had not the slightest doubt of their bad effect upon the hay above them, as in such barns a man's clothes would become saturated in an hour with ammonia.

Hon. JOHN BROOKS, of Princeton, being called upon, spoke of his experience in regard to barns.

They should be adapted to the immediate circumstances of the farmer. He had built two with some good arrangements in each; but he seemed to favor the old New England style, with a door at each end. He objected to pitching hay higher than the beams, and thought the bays should be broad. He has a barn cellar, and formerly worked his manure over in it the first year, but thought it injured his hay, as it changed to an ash color. He now carts out his manure in the spring, and sees no discoloration of the hay; would have a cellar aside from his barn, and shove the manure into it, but would not have it under the hay. He has a cow-yard, 40 by 70 feet, which is covered, and he thinks the manure improved. He ventilates his barn at the top, but none can be kept entirely sweet. High barns were objectionable, as we should not pitch hay more than sixteen feet. He recommended turning out cattle for water, but we should be careful, and not let them drink too much, which they were inclined to do.

Gen. SUTTON, of Salem, being called up by Mr. Howard, said he commenced farming thirty-five years ago on four acres, and finding his barn not large enough, built another 42 by 70 feet, with 18 feet posts. Has a cellar under this barn, a part of it for vegetables and fruit, and keeps eighteen cows, with other cattle, numbering forty. The manure goes into the pen underneath. He has three ventilators to his cellar, which terminate at the eaves of the barn. The barn is ventilated by two small windows at the gable end, and generally contains 80 tons of hay. Has three barns 100 feet apart; one he keeps for hay, another for oxen and horses, and the other for machines and farm implements. In it there is a carpenter's shop, and also a room for his men, whom he supplies with agricultural newspapers. As to barn cellars, he thought they should be ventilated, as they might otherwise damage the hay. He said again, he commenced with four acres, but now has four hundred, and likes farming better and better as he grows older. To the question as to whether he had made money, he replied he had not lost any! And to that of Mr. Wetherell, as to composting his manure in his cellars, he replied that he cleaned them out once a month, and composts it where he uses it. As to whether he approved of barn cellars, he responded to Mr. Stedman that he did, and would as soon build a house without a chimney as a barn without a cellar.

Mr. BROOKS said Gen. S. carried out his manure, and as one side of his cellar was open, it did not test the question as to the odor from cellars. Even in winter ammonia would rise.

Hon. J. QUINCY, Jr., said he moved his manure often, and covers it with muck. He was glad to hear that others carried it out in the winter, as he felt encouraged.

Mr. DAVIS, of Plymouth—after apologizing for not being present to preside—said he could perceive no evil in keeping manure in cellars from October till spring; but in the summer, he admitted that in horse stables the ammonia might be injurious, and he spoke of the sleighs of the Boston stable-keepers being discolored, and the varnish injured, by being stored in their stables during the warm season. But we should consider the difference between horse and cow manure. He also complimented Gen. Sutton for the general neatness and convenience of his farm buildings, and particularly alluded to his tool-house, where every little piece of iron was saved for the time of need, which, according to the old maxim, came once in seven years.

Mr. STEDMAN thought we needed system in our farm buildings, and would have the main out-buildings under one roof. He recommended barn cellars, and in his own case he had not experienced any injury to his hay, though he does not carry off his manure in the winter. Uses muck. He objected to tying cattle; spoke of an ox being thrown, and said they should not press against the stanchions. His platform for cattle is three and a quarter inches high, covered with additional strips of plank a little separated, to drain off the urine.

Mr. QUINCY alluded to sand as bedding; he thought it improved the manure, and prevented the escape of gases. His foreman thought well of it, and it had been much used in England in horse stables. Mr. Q. here alluded to the great racing-horse stable of Senator Hammond, of South Carolina. These horses are kept in sheds, with a little negro to attend each one. Horses need light and air, and his own have a small window at their heads. Darkness makes horses skittish, yet the jockeys like it on this account. For unloading hay, he commended the horse pitchfork, as it was expeditious, and would take off 300 or 400 pounds of hay at once.

Mr. BROOKS thought the horse pitchforks unprofitable, as they required a horse and three or four persons with them.

Mr. QUINCY replied that he recommended them only in *high* pitching.

Mr. HOWARD observed that they had for a long time been used in Pennsylvania, and it was only claimed that they were important for high pitching. They would put up a load of hay in five minutes.

Mr. WETHERELL thought as the argument now stood, the general opinion of the meeting was against barn cellars. He regarded Mr. Brooks' theory as the true one, of keeping the manure not under the barn, but beside it.

Mr. STEDMAN replied that if the opinion was against cellars, it was simply because the best

speakers were against them. He then briefly commended cellars.

Mr. HERSEY, of Hingham, said he had a barn 100 by 35 feet, with a cellar under it, with 10 feet opening, but had experienced no trouble with his hay. Had sold 50 tons at the rate of \$24 per ton. He also alluded to his keeping sheep and cattle in his barn cellar, saying they did well.

Mr. ANDREWS, of West Roxbury, observed that he had room for thirty cattle in his barn; throws the manure into the cellar, but perceives no bad effect upon the hay. The cellar was ventilated, and he used muck to absorb the urine. He thought the sense of the meeting would be—*barn cellars well constructed*.

Mr. BROOKS said he would have a spout to conduct off his liquid manure—though muck was good to absorb it. He had used sand; thought it not valuable as an absorbent, but his theory was, that the urine decomposed the sand, and by setting free the potash, it was useful in the manure heap.

Mr. ANDREWS further observed, that a barn merely for hay required no cellar; a single roof on four posts would be best. Hay in stacks is bright and fresh, and cattle eat it readily.

Mr. HERSEY said he had some hay packed closely in a barn on a wharf, without any ventilation, and it was the best he ever had. Air, he surmised, was rather injurious to hay, carrying off its aroma, and it might be ventilated too much.

Mr. WETHERELL agreed with Mr. H. Hay-barns need no ventilation.

Mr. BIRD, of Watertown, alluded to the importance of cheap barns, which a man of moderate means could build. Many barns he thought cost as much as the majority of farmers are worth. It was important to tell these men how to build a barn worth \$500, or less; and he spoke of one built in Belmont for \$400, with a cellar.

Mr. STEDMAN alluded to his barn, which cost over \$500.

Mr. HOWARD, of the *Cultivator*, inquired what were the principles involved in building a barn, and what in keeping hay, cattle, manure, &c. The Chinese keep their tea close to save its aroma. Does hay need more air than tea? It will keep well close, if no change of temperature takes place; but *cattle* must have air. Mr. H. here alluded to the English, touching their barn and cattle arrangements, and said they were rather behind us in this respect. Their winters, however, were lighter than ours, and they might not require tight barns. Now, he said, the practice was becoming common, of feeding their cattle and keeping their hay under sheds during the winter. Mr. H. also spoke of some other subjects in this connection.

The time having arrived for closing the meeting,

the chairman announced *Fruit Culture* as the subject for the next discussion, when the Hon. MARSHALL P. WILDER would preside.

For the New England Farmer.

RETROSPECTIVE NOTES.

THE RELATIVE VALUE OF DIFFERENT VARIETIES OF CORN.—This communication, which the reader will find in the issue of this journal of Jan. 18th, and in the February number of the monthly edition, is deserving of commendation, partly because it puts upon record the results of an important investigation which go far to settle some questions which have long been unsettled, and gives us well-ascertained facts which will be of great use for future reference, and partly because it presents a most praiseworthy example of the right mode of settling questions concerning which differences of opinion are found to exist among members of any farmers' club, or among farmers at large—members of the great, though unorganized, Farmers' Fraternity. If the far-famed Farmers' Club of the American Institute had adopted a similar plan for the settlement of those differences of opinion as to seed corn, which O. K. so appropriately remarked upon in the January No. of this journal, and in the weekly issue of Dec. 7th of last year—that is, if the members had made provision for testing their opinions and settling their differences by a series of carefully-conducted experiments, they would have done better than they did. A great step in advance would be taken, if all farmers' clubs would imitate the example of the club at Southboro', and whenever differences of opinion or practice are found to exist among the members, some provision were made for settling those differences by submitting them to the test of accurate and faithful experiments. That is the true way to settle such differences. Thanks, then, let us all award to the Farmers' Club of Southboro', for the praiseworthy example it has given of the right and proper way to settle differences of opinion and practice among farmers, and to advance the interests of agriculture and agriculturists.

MORE ANON.

THE EDDYSTONE LIGHTHOUSE.—The Eddystone Lighthouse has now withstood the storms of a century—a solid monument to the genius of its architect and builder. Sometimes, when the sea rolls in with more than ordinary fury from the Atlantic, driven up the Channel by the force of a southwest wind, the lighthouse is enveloped in spray and its light is momentarily obscured. But again it is seen shining clear like a star across the waters, a warning and a guide to the homeward bound. Occasionally, when struck by a strong wave, the central portion shoots up the perpendicular shaft and leaps quite over the lantern. At other times a tremendous wave hurls itself upon the lighthouse, as if to force it from its foundation. The report of the shock to one within is like that of a cannon; the windows rattle; the doors slam; and the building vibrates and trembles to its very base. But the tremor felt throughout the lighthouse in such a case, instead of being a sign of weakness, is the strongest proof of the unity and close connection of the fabric in all its parts.—*Lives of British Engineers.*

For the New England Farmer.

SMALL AND LARGE FARMS.

BY JUDGE FRENCH.

England produces an average of about 28 bushels of wheat to the acre, while France produces about half that quantity, and the United States considerably less than France. Why is this so? An Englishman will answer at once that it is because in England the land is owned by a few large proprietors, while in France and the United States it is divided into small tracts among many owners. In England, the real estate of a person dying intestate all descends to the eldest son, while in France, as in this country, it is equally divided among all the children. In England, the tendency of the laws is, to increase the land of the land-owner, to make the rich richer, and if not to make the poor poorer, at least to keep him always as poor as he now is.

Laverne, in 1855, estimated that there were about 200,000 farmers, that is, persons who occupy as tenants of others, in England alone, occupying an average of 150 acres each. Of these, about one-half cultivate their farms themselves, with the assistance of their families. In France, besides the five or six millions of small holdings, below twenty acres each, there are four or five hundred thousand averaging fifty or sixty acres each, and many very large estates, especially near Paris. The difference between the actual extent of the farms, *as occupied*, in England and elsewhere, is usually exaggerated. A few immense land-owners are referred to as illustrations of British agriculture. The estate of the Duke of Sutherland, the largest in Great Britain, contains 750,000 acres, but this is in the North of Scotland, a wild and rough country, which does not admit of the fine cultivation of the lowland counties. The immense estates of the Duke of Northumberland are situated mostly in the county of that name, one of the most mountainous and least productive. It is not usually on those immense estates that we find the most profitable cultivation. The large proprietors do not usually manage their own estates, or even keep them much in their charge. They are divided off into farms of 100 to 1000 acres, and leased, and the tenant or farmer occupies them as if they were his own. Often, indeed usually, there is no written lease, and the tenant goes on from year to year for a generation, under a sort of custom, and at his death, his widow or son continues in the same occupation, so that the homes of English farmers are even more permanent than those of American farmers. Now, if each of these farmers owned his farm, would he not cultivate it as well for himself and the country, as he now does?

It has been often said in England that the best lease is that which makes the tenant most like an owner. Yet, we observed while in company with

English farmers, that they supposed that a tenant-farmer cultivated better than an owner. We were struck with this fact, when travelling through Lincolnshire with some very shrewd farmers. "There," they would say, "is a farm owned by the occupant; if he paid rent he could not afford to raise such poor crops."

CAPITAL NECESSARY.

The secret of this matter seems to be this. To cultivate land profitably, in an old, long settled country, it must be cultivated well and systematically, and to do this requires capital. A farmer in England, who expends the most of his money to buy a farm, has not enough left to cultivate it liberally. A thousand-acre farm in Lincolnshire requires about \$50,000 capital, to enter upon and stock and manage it to the best advantage, as tenant merely. It is not the extent of the farm, but the means and skill to cultivate it in the best manner, that make it profitable. Put upon a Lincolnshire farm of this extent, a farmer with small capital, and he must ruin the farm and himself. He cannot buy stock, tools and manure, nor employ labor requisite to make it productive. The farmer with small capital had better remain upon a small farm. There are certain obvious advantages in farms of not very small extent. Costly labor-performing machines, such as steam-engines for threshing, and the like, could not be owned to advantage by small proprietors, and labor can be better systematized on a large than a small farm. The practical objection to the English system of farming is not so much to its agricultural results, as to its oppression of the laboring classes. The laborer in England is generally poor, ignorant and degraded, compared with any class of laborers which we have in New England, and so long as the present laws of property continue, he must always remain so. English agriculture is profitable to the tenant-farmer, and to the land-owner, because the poor laborer who does the hard work gets no just recompense for his labor.

THE ISLAND OF JERSEY.

This little island, although governed by England, is not subject to the English laws as to inheritance; but the old Norman law, by which each child inherits equally the land of the parent, still prevails, by a sort of custom, and has prevailed for nine hundred years. This is the island from which came the famous breed of Jersey cows. The effect of their laws has been to divide the land into very small holdings, a farm so large as forty acres scarcely being found on the island, and most of the farms containing only from five to fifteen acres. This island, thus divided, is cultivated like a garden. It is rented at an average of twenty to twenty-five dollars per acre annually, and the farmers live in comparative comfort.

FRANCE.

Lavergne says that in France, cultivation is generally better in those districts where the small properties predominate, and that it is the same in Belgium and Germany, and, indeed, everywhere else, except England. The fact is, that England, though as a nation enormously in debt, yet has immense resources. She is not an agricultural nation, but a manufacturing and commercial nation, and she takes the wealth realized from other sources, and invests it in her soil, and so develops its resources. France is more an agricultural nation—she cultivates far more acres for an equal quantity of grain, she keeps far less stock on the same number of acres, and produces far less of green crops in proportion to her grain. Her error is like ours. She occupies too much land for the capital she employs. This may be excusable in Americans at the West, on land which costs nothing, but it is ruinous on old and valuable lands.

France has expended her treasures, for a half century or more, in revolutions at home, while England has had peace within her own borders. Like a farmer in a long law-suit, France comes out poor; and finds the land has suffered from neglect, while its title was in controversy. She is now living *as she can*, till she recovers herself, and can invest labor and capital in the culture of her soil. She is an illustration, with her fine soil and climate, and low agricultural state, of the saying of Montesquieu, "It is not fertility, but liberty, which cultivates a country."

Our conclusion is, then, that a well-cultivated farm is most profitable, whether it be large or small, and that the productiveness of land does not necessarily depend much upon its being owned or occupied in large tracts. It is capable of mathematical demonstration, that with our prices of labor and of products, the English system of farming, with their rents of land, could not support itself, in this country. The cheapness of our land ought, however, to nearly or quite compensate for the higher price of our labor. Certainly, the high price of labor is no reason for our employing it foolishly, and it is an additional reason why we should employ animal and steam power, and improved implements, and those ought to compensate for the lower cash price of our products. The great hindrances to our agriculture are want of capital and want of permanent occupation, or the spirit of unrest which unsettles all our plans.

Farming is still the best business in the country, taking the average throughout, and certainly it is the business which admits of most improvement.

VALUE the friendship of him who stands by you in the storm; swarms of insects will surround you in the sunshine.

For the New England Farmer.

NIGHT STORM.*

BY R. F. FULLER.

Of all the year, of all the years,
It was the coldest night.
A wintry tempest stunned the ears,
And smote upon the sight;
A cloudy pillar moved before,
The vanguard of the wind;
Whose cohorts, with increasing roar,
A legion, rage behind.
Down to the bulb, insensible
Before the freezing blast,
Forty degrees the mercury fell;
And spirits sank as fast.
The cloud, that led the coming host,
And checked, awhile, its wrath,
Was torn to shreds, its fragments tossed
And strewn along the path,
Now, like an ocean surf, around
Our rural dwelling raves
The air against the firmer ground,
With fury of the waves.
It plucks the snowy shroud away,
And bears it back to heaven;
Clutches the pine and hemlock spray,
Before its fury driven.
Their foliage brief, though fine as hair,
Minuteness hides in vain:
The rude hands of the tempest tear
And scatter it like rain.

Grateful for shelter, as I sought
To sleep, i' the tempest dark—
In judgment, like my house, I thought,
Will prove the Christian ark.
How will the shelterless endure
Its over-powering might?
—My God! and how will all the poor
Bear with the storm, to-night?
The sailor, on the frenzied sea,
Who climbs the bowing mast,
Kind Father! we commit to Thee—
O! save him from the blast!
The poorly-housed and poorly-clad,
With little fire to warm—
Great God! to think of them is sad,
In this ferocious storm!
We pray for them—we can no more,
At this inclement hour:
Shield from its fury, we implore,
Or temper, by thy power!
—And may the shelter, which we need,
Earth's tempest to abide,
To Christ, the Ark of safety, lead,
From the last storm to hide!

* Written with reference to the gale of February, 1861.

For the New England Farmer.

A PLEASANT RIDE, AND A WELL REGULATED FAMILY.

Well, what of that? Don't every body now have pleasant rides, and is not New England full of such families? Not exactly so. Our ride was peculiarly pleasant. Good company, *all farmers*, good horses, good sleighing, and a good object.

On Saturday last, a few of us visited the barns of H. H. PETERS, Esq., of Southboro'. We were so fortunate as to find him in his favorite element, superintending his beautiful herd of Ayrshire cattle. He received us with his usual urbanity, showing us his whole stock, and answering our numer-

ous questions as though he was perfectly familiar with each member of his family.

His whole stock, except seven pairs of oxen, are thorough bred Ayrshires. We were first introduced to the younger members of the family. With their mild, pleasant countenances and bright, expressive eyes, they seemed to say, Glad to see you, gentlemen; we are always treated kindly, and if you are master's friends, you are ours, and we bid you welcome. They were tied very close to each other, but there was no quarrelling, as is the case in some families, no teasing for more or better; their whole deportment gave evidence of the power of kind treatment, united with good care and systematic feeding.

The oxen next claimed our attention—seven pairs, from three years old and upwards, weighing over 3600 lbs. to the pair. Next came the cows—all handsome, round, small-boned animals, with the marks of excellent milkers. Mr. Peters remarked that some of them had given 23 qts. per day. The bulls, horses and sheep completed the family, 100 in all, including about 10 or 12 sheep. They are all kept on steamed food, and fed three times per day. The steaming is performed four times per week, at an expense of one shilling each time for fuel. Mr. Peters is satisfied that he keeps his stock cheaper than they could be kept in any other way. Certainly, nothing is wasted. We all left the premises very much gratified, and with the impression that farmers generally, and especially the trustees and superintendents of our State farms, might profit by a view of the perfect neatness, order and system of the whole arrangement.

ONE OF THE COMPANY.

Westboro', Feb. 12, 1862.

For the New England Farmer.

MANAGEMENT OF NEAT CATTLE IN WINTER.

1, Their cribs should be so separated by partitions that every animal would be sure to receive all that is fed to him, without any danger of being robbed by others. I think this first in importance, because in feeding the animals left without partitions you do not know which eats it, the stronger robbing the weaker, consequently making the weak still poorer.

2, They should be fed at regular intervals, all they will eat up clean; that is, they should have their regular meals. I commence in the morning, feeding little at a time, and keep them eating until I think they have enough, and then at noon and night, being careful to feed at the same hour of each day. I had rather they would be fed but twice, than to feed out of the regular time.

3, They should have a variety. Where the feed is composed of meadow hay, wheat and oat straw, corn fodder, &c., as it generally is through the country, it should be fed alternately; if a portion of each kind is given them every day, they will eat and relish it better. I can remember when my father used to feed out all his corn fodder the first thing, and then the meadow hay, &c., feeding only one thing at a time; consequently, all the fodder was rejected but the leaves, and thrown out with the manure; but when given as a change, they will eat it all up clean.

4, Roots are one of the best things to feed young, growing cattle in winter. They tend to

keep them loose, and enable them to extract more nourishment from their fodder. They should be fed regularly each day. From my experience, I think the ruta бага is the best to feed to young cattle. I think they contain something that cattle require that the others do not. Potatoes and carrots are very good. I have had young cattle fed with them gain more in the winter than they did in the summer on grass.

5, Watering and exercise. In watering, care should be taken that every animal drinks all he wants. They will naturally take all the exercise in the yard, they need at the time of drinking. I keep them in their stalls all the time except when out to drink. The more they are kept out in the cold the more hay they will require, and by being kept up all the time the manure is all saved.

The farmer cannot be too regular in tending his stock through the winter. Anything that is not worth doing well is not worth doing.

West Newfield, Me., 1862.

J. T.

EXTRACTS AND REPLIES.

I am anxious to learn through the *Farmer* the way of treating a cow which appears to run too much to milk. She calved the 2d of this month, and is quite thin of flesh, although bright and smart; gives a ten-quart pail full of milk in the morning, little less at night. She was poorly fed the first of the winter on straw, corn-fodder and poor hay until some two weeks before calving, when she had two quarts of barley bran, scalded, and good hay. When I raise barley I have it bolted; the flour is used, and well liked in the family. I have raised and used it for six years, and find the value of that grain far beyond what I expected. I like it to raise on account of its being good to seed with, as I get a far better catch than with any other grain. I get about half as many pounds of fine flour as from common wheat, and find the bran to be heavier than that of wheat, therefore I value barley more than corn. I continue giving this bran to my cow, but rather think it is the barley that runs her to milk. We churned the first week's gathering of cream, which made 11 lbs. 3 oz. of butter.

Will you, or some of your subscribers, inform me of the cause of my cows' eating boards, &c., last winter, and this winter not attempting to do so?

In regard to cows doing well in calving, if people would feed cows extra some two weeks before they drop their calves, as a general thing, there would be no trouble; it matters not much what they are fed upon, but I prefer a little meal of some kind; if I should have my choice, I should feed barley.

T. S. F.

Felchville, Vt., 1862.

REMARKS.—We know of no way to reduce the milk but to reduce the feed. Feed on good hay alone, for a time.

It is not well settled what it is that causes cows to chew bones, boards, leather, &c. Some say it is occasioned by a want of bone-making material, the phosphate of lime, perhaps. If this habit were confined to cattle that are poorly fed or thin in flesh, we might suppose that it grows out of a

want of a proper quantity of nutritious food; but such is not the case. We have as often seen it in thrifty and well-conditioned cows. It can do no harm to mix a little *bone-dust*, that is, ground bones, with meal, and feed to the animal affected, two or three times a week. Dr. DADD says—"It is well known that phosphate of lime, potass, silica, carbonate of lime, magnesia and soda are discharged in the excrements and urine of the cow. Supposing the cow's bones to be weak, it is possible that the gelatinous elements preponderate over those of lime, soda and magnesia."

BUGGY PEAS.

It has been often said that "It is better late than never," to do good. In looking over the monthly *Farmer* for 1860, I noticed in the July number an article headed "Buggy Peas." I think I can give the writer and many others some information that will solve the mystery as to how the bugs got into his phial. Many years ago, I discovered a small, bright red nit or egg, placed on the outside of the pea-pod, when about half-grown, opposite each pea, and have seen the same on the pea inside the pod. Also, when the peas were shelled green, a small puncture on one side of the peas; on digging into the pea, I found a small worm which becomes a bug after the peas are fully ripe. The egg is, I have no doubt, deposited by the old bug, as I have seen them flying among the peas in the field. The only way to prevent peas being buggy is to sow early or very late. I have heard it remarked that to prevent peas being buggy, they must be sown in the old of the moon in May. I suppose everybody knows the moon has nothing to do with the bugs. It is evident to me that those sown early get out of the ways before the old bugs thaw out, and that the bugs have had their day, and are gone before the late sown are grown.

JAMES PALMER.

South Hampton, N. H., 1862.

THE SONG OF AN OLD PITCHER.

Let the wealthy and great dwell in splendor and state,
I envy them not, I declare it;
I eat my own lamb, my own chickens and ham,
I shear my own fleece, and I wear it.
I have lawns, I have bowers, I have fruits, I have flowers,
The lark is my morning alarmer;
As true freemen now, pray God speed the plow,
Long life and success to the farmer.

The above I have never seen on paper. I learned it when a child, from an old-fashioned French jug, now called pitcher, in my father's house, more than sixty years ago, in the Emerald Isle.

A FEMALE READER.

South Groton, 1862.

SEEDING TO GRASS.

We, the sons of the turf, who get our living by digging in the dirt, need reminding of our duty every month in the year. Where is the farmer, one in a hundred, be the number of his acres more or less, who can say, "I have one half acre doing all it might do." When we manure in the hole, the seed comes in contact with it, as it should do; but when we plow in manure five or six inches deep, and then sow grain and a little fine grass seed on the very surface, can this fash-

ion be good policy? There is no way to make so much grass with so little manure as the following: Plow up worn-out grass land as soon as may be after the summer drought has past; pulverize well; manure sparingly; sow two or three sorts of seeds, and give it a shallow covering; thus the little manure, neither too deep nor too shallow, does all it can do, and no crop is lost.

Elliot, Me., Feb. 1, 1862.

A. ALLEN.

KEEP THE BACK COVERED.

One prevalent way of taking cold, is from exposure of the upper portion of the back while in bed. We divest ourselves of the warm clothing we have worn during the day, put on a thin night-dress, go to sleep, and perhaps awake in the night feeling as if an iceberg lay between our shoulders. This is particularly the case when two persons occupy the same bed—each one facing outward, the bed clothes are drawn from the backs so as to expose the lower part of the neck and between the shoulders to the cold air of the room, the lungs being so near that part of the body as to be sensibly affected by its exposure. We think a great many severe colds are taken in this way that cannot otherwise be accounted for.

OATS FOR SHEEP—TO CURE A CALF THAT SCOURS —DWARF BROOM CORN, ETC.

2. Will you, or some of your reader, inform me how many oats it will do to feed to ewe sheep at a time, and if they will hurt them?

2. What will cure a calf that scours?

3. If any subscriber of the *Farmer* purchased the Dwarf Broom Corn Seed advertised the last spring, will they please give the results of their sowing?

4. Please tell me the size of the "Farmers' Encyclopedia," and the number of pages it contains?
Canterbury, N. H., 1862. S. E.

REMARKS.—1. A pint of sweet oats per day to a sheep will be excellent for it.

2. "Scours," or diarrhoea, is not always a disease, but an effort of nature to get rid of that which would be injurious, and, therefore, a mild purgative of castor oil, or something else, is good. This may be followed with two or three messes of warm flour gruel, at the same time not allowing the calf to take much milk from the cow.

4. The Farmers' and Planters' Encyclopedia contains 1179 pages, royal octavo size.

SEED CORN.

We cannot give the name of our correspondent who wrote over the initials "E. R.," upon the subject of seed corn. We have many inquiries of this kind. It would be more pleasant and profitable, if correspondents would give their full address when communicating to us.

"C. T. F.," North Bridgewater, Mass., is informed that we know nothing of the expedition to go into the "wool business" at the West, beyond what was published in the *Farmer* to which he refers.

For the New England Farmer.

EXPERIMENTS WITH CORN.

I saw a statement by Mr. Henry H. Peters, of Southboro', Mass., in relation to corn, in the *Farmer* of January 18, I think. I have a kind of corn that is hard to beat, as to the amount of shelled corn that a basket of ears will make. A few days since I shelled some for bread meal, and selected the best ears, as I usually do. I measured and weighed: First I weighed out 70 pounds, which I supposed would make 1 bushel of shelled corn; I shelled it carefully, measured up a bushel, and it weighed 60 pounds; then weighed the rest which was left, it being 6 ounces. The cobs weighed 9 10-16 pounds. The above I took from a bin on the east side of my corn house. I then took a basket full from the bin on the west side, so I picked out a bushel basket of ears which weighed 50½ pounds; I shelled it carefully as I did the other; the corn I measured in sealed measures, and the amount was 23½ quarts, which weighed 44 pounds. The cobs weighed 6½ pounds, which is at the rate of about 8½ pounds of cobs to 60 pounds of shelled corn.

As to the kind of corn, I know of no particular name for it: it is eight-rowed, yellow, rather small in size, but the ears are good and fair length.

For years past I have seen much in the *Farmer* about corn being diminished in weight by being cut up and stooked before it is quite ripe, or hard. I cut and stook my corn as soon as it gets fairly glazed over, and when many of the small ears are in the milk. I think it does not injure the corn, but is a great saving of labor, and there is much in favor of benefiting the fodder, as, if corn is cut and stooked in the right time, and in the right manner, there is a great advantage over the old-fashioned way of cutting the top stalks and letting the corn remain in the field until husking-time.

I have shelled a bushel of corn from cobs that weighed less than 8 pounds.

A GOOD HEIFER.

Mr. Wm. Hooper, of this town, butchered a heifer 21 months and 10 days old, which weighed 622 pounds.

H. ALLEE.

Walpole, N. H., Feb., 1862.

CONTINENTAL MONEY.—Mr. Lossing, in his *Field Book of the Revolution*, gives a scale of the depreciation of the Continental money. In January, 1777, the paper currency was at five per cent. discount. In July it was at twenty-five per cent. discount, and before the end of the year three dollars in paper would not command a silver dollar. In 1778 the paper currency continued to depreciate, so that in April four dollars in paper were equal to one in coin. In September the ratio was as five to one, and at the close of the year was six and a half to one. In 1779 the depreciation rapidly continued. In February the ratio was eight dollars and a half of paper to one of silver, in May it was twelve to one, in September eighteen to one, and before the close of the year a paper dollar was only worth four cents. In March, 1780, a paper dollar was worth three cents, in May it was worth two cents, and in December seventy-four dollars in paper was worth one dollar in silver. At this point the historian stops.

THE PARSNIP CROP.

The carrot crop has justly become quite popular as a feed for stock. It is cultivated all over New England for this purpose, but in the greatest quantities in the neighborhood of large towns, or cities, where a good many horses are kept. Stable-keepers are confident that they are an economical food, and purchase them by the ton, at prices varying from eight to twelve dollars. This practice has attracted the attention of many farmers, and they, also, now feed their one, two, or more horses, daily, with a mess of carrots.



FIGURE 1.
Common Long-rooted
Parsnip.

The *Parsnip*,—though pronounced by most persons as far more palatable than the carrot,—has not yet found its way to the feeding-troughs of the stable-keepers or of our neat stock. It strikes us as singular that a vegetable so nutritious and delicious to the human palate, and at the same time so highly relished by our domestic animals, should not have long ago come into popular favor. It certainly is not because the carrot can be more easily cultivated than the parsnip,—that it possesses higher nutritive properties, or that it is more eagerly sought for by our stock. In all these particulars the parsnip has the precedence with one single exception—the seed does not germinate so readily and certainly as that of the carrot. In other respects it has advantages over the carrot. It will grow on a wider range of soil, stand drought longer, and the young plants are so conspicuous as to render the first thinning and weeding altogether easier than that of the carrot.

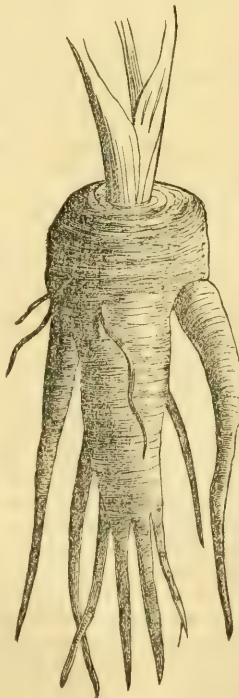


FIGURE 2.
Fingers and Toes.

Compared with the turnip, the parsnip contains about double the quantity of heat-giving and fat-forming compounds, such as oil and starch. This renders it particularly suitable as a food for fattening purposes, or for milk-producing animals.

The keeping qualities of the parsnip are equal to those of any other root we produce. If stored properly in a cool, moist (not wet) cellar, they will remain plump and brittle for seven or eight months.

In Wilson's Farm Crops it is said that the parsnip, compared with the carrot, "presents a superiority in many respects as a crop for feeding purposes. It contains on an average about 5 or 6 per cent. less water than the carrot, which materially improves its keeping qualities, the difference being made up by an additional proportion of solid extractive matter, by which its general feeding qualities are proportionably increased. The flesh-forming compounds, too, are nearly double those contained in the carrot; while the oil, starch, &c., in its composition, would indicate that for fattening as well as for fattening purposes it is of greatly superior value."

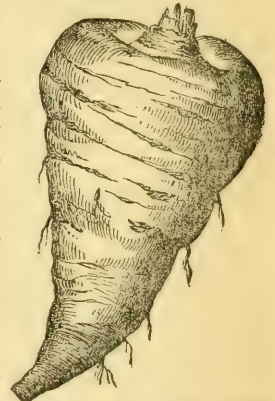


FIGURE 3.
Hollow-Crowned Parsnip.

SOIL AND CULTIVATION FOR THE PARSNIP.

Any rich, deep, well-drained soil, whether it be of granite formation, or sandy or clayey loam, will produce good crops of parsnips. A decidedly gravelly soil would not be favorable. The soil should be deep, because the plant loves to penetrate the ground with its long, tapering root, and throw out hair-like feeders into the surrounding soil. When it has this opportunity, and the soil is sufficiently enriched, the parsnip will send down one main root, such as is illustrated in Cut No. 1; but without these advantages, it will be quite likely to assume the form of Cut No. 2, dividing itself off into numerous branches, spoiling it for the table, and depreciating its value even for stock. This is called running into "Fingers and Toes."

Cut No. 3 is *The Hollow-crowned Parsnip*. It is less symmetrical in shape, and has a much greater diameter at the crown, or top, which is slightly concave. The root is of a yellowish-white color, tapering from the top, and not so long as the Long-rooted variety, No. 1.

Cut No. 4 illustrates, 1, The common flat body moth that infests the parsnip.



FIGURE 4.
Common Flat Body Moth.

Figs. 2 and 3, the moth at rest, and of the natural size.

Fig. 4, caterpillar of the moth.

Figs. 5 and 6, the pupa of natural length.

Fig. 7, the pupa rolled up in a leaf of the plant.

In cultivating a field crop of the parsnip, the rows should be far enough apart to use a horse-hoe or cultivator, say two and a half feet, which will secure a crop for about one-half the cost required to work them by hand. The plants in the rows ought not to be nearer than six or eight inches of each other. The ground should be frequently stirred,—especially if the season be a dry one,—and if a subsoil plow were passed through between the rows once or twice during the summer it would considerably aid the crop. By this process we have raised parsnips at the rate of a *thousand bushels* to the acre, nearly every one of which was long, smooth, and almost as white as snow. The only difficulty in securing the crop was in digging; the man doing that work saying that he “*could dig post holes* about as fast.” We hope many of our farmers will commence in a small way to cultivate this valuable crop. If they do, we suggest that twenty-four hours before sowing the seed, they wring out a piece of cotton cloth in warm water, and wrap the seed in it, which will very much facilitate its germination.

SINGULAR FACTS IN HUMAN LIFE.—The average length of human life is about 28 years. One-quarter die previous to the age of 7; one-half before reaching 17. Only one of every 1000 persons reaches 100 years. Only six of every 100 reaches the age of 65, and not more than one in 500 lives to 80 years of age. Of the whole population on the globe, it is estimated that 90,000 die every day; about 3700 every hour and 60 every minute, or one every second. These losses are more than counterbalanced by the number of

births. The married are longer lived than the single. The average duration of life in all civilized countries is greater now than in any anterior period. Macaulay, the distinguished historian, states that in the year 1685—not an unhealthy year—the deaths in England were as one to 20, but in 1850, one to 40. Dupni, a well known French writer, states that the average duration of life in France from 1776 to 1843, increased 52 days annually. The rate of mortality in 1781 was one in 29, but in 1850, one in 40. The rich men live on an average 42 years, but the poor only 30 years.—*Free Nation*.

For the New England Farmer.

WHEN SHALL WE PLOW?

MR. EDITOR:—I find this question propounded, and partly answered, in your issue of November 9, by Mr. George Campbell, of West Westminster, Vt., who seems to favor fall plowing on account of its forwarding the spring work when farmers are hurried, and probably killing many worms and insects by exposing them to the frost, &c. He notes, also, that the soil will be pulverized by the action of frost and the atmosphere. Most will readily admit his views as true, and yet not be fully persuaded that it is good economy to seed this fall plowed land in the spring, without again plowing most thoroughly. Weeds and foul stuff will be sure to vegetate as soon as the frost is out in the spring, and no process for putting in grain is so effectual an exterminator as a good plowing. Then, again, lands lying several months after being plowed, become packed by repeated rains, and are almost as hard in the spring as if they had remained unplowed in the fall.

The plow I regard as the farmer's great *fertilizer*. It is impossible to use it too often on our fields where the *sod has decayed*. Speed the plow, should be the motto of every farmer. Nothing like it to counteract the effects of drought. Nothing like its free use in securing a bountiful harvest. I say plow! Plow in the fall—plow in the spring—plow at all times when you can. Can't plow too often.

As to fall plowing of sod land, very much depends upon the character of the soil. A stiff clay would undoubtedly be better for fall plowing, as the winter's frost would greatly subdue it. But a sandy, or vegetable loam, I think, had best be plowed in the spring, as near the time of planting as possible.

My reasons for this are, that they do not receive but little advantage from winter frosts when plowed, and do not admit of replowing in the spring, as by so doing we would be liable to disturb the sod and waste much of its value. If not plowed in the spring, much more labor is required to keep the weeds down through the summer.

I will here refer to a piece of meadow, of four acres of vegetable loam, my father commenced plowing in the fall, for the purpose of destroying worms he knew infested it. It so happened that frost set in when he had about half plowed the piece, and the remainder was plowed in the spring; the part plowed in the fall was, as to quality, esteemed a little the best of the field. The spring plowing was done just before planting; the whole field was thoroughly harrowed, the fall-

plowed part requiring much more labor to prepare it, and all through the season double the time was required to keep it clean of grass and weeds. At harvest it was judged by competent men that the fall-plowed piece would yield forty bushels to the acre, and the spring-plowed fifty—or ten bushels more.

One of my neighbors commenced plowing early in March on a piece of dry land, for the purpose of testing the question as to the advantage of plowing just before planting. He left alternate lands or strips unplowed through the piece, until he was ready to plant, the first of May. The result was decidedly in favor of the last plowed pieces in the crop, as well as in the care of it. The above facts have been repeatedly verified in my own experience, so that I have come to consider them incontrovertible. I hope this subject will not be passed by in silence by observing farmers, but that we shall have their views and experience to enable us wisely to answer this all important question to many—when shall we plow?

Rochester, Mass., Nov., 1861.

O. K.

COE'S SUPERPHOSPHATE OF LIME.

During the last four or five weeks, we have been favored with several articles upon this subject, from correspondents in various portions of the State, giving their experience in the use of this phosphate as a fertilizer. We have also been requested to state what the results of its use have been on our own farm.

Last spring we procured several bags of this lime of PARKER, GANNETT & OSGOOD, and used it upon various crops, and with such results as to decide us to try it again, which we mean to do the coming season. It was used, side by side, with various other agents, such as *beef scraps, corn-meal, woolen rags, cobs soaked in urine, guano*, and a compost of *night soil*, and it was not excelled by any of them, excepting the latter. The whole field was moderately dressed with hen manure. Where the night soil compost was used, the corn was heavier than on any other portion of the field. We used the superphosphate on peas, beans, turnips, beets, carrots, parsnips, cabbages, and other plants, and found it answering an admirable purpose with them all. But we gained, especially, what is most desired, an *early start in the corn crop*, which is often the turning point of profit or loss in that staple article. Where it was properly applied to this crop it stimulated germination, brought the corn out of the ground with stocky and vigorous stems, and gave it an unusual vitality for several succeeding weeks. Any fertilizer that will do this, is of decided importance to the farmer. But a serious mistake is often made in its application. Instead of spreading it over a surface of 12 to 20 inches, and thoroughly mingling it with the soil, it is thrown down in a mass, and the seed cast upon it, so that if the tender germ is not checked, it grows away from the

phosphate into soil that has not been fertilized by it.

During a journey into New Hampshire in the month of June last, a good farmer invited us to look at some experiments he was making with this fertilizer. Side by side, on good land, he had manured the rows, one with a common shovel full of excellent barn manure, and the other with a gill of Coe's superphosphate, and where the latter was applied, the corn had made an average growth of a *foot* more than the other. In another town, in a field of corn which we were called to look at, the difference was nearly as striking. We do not suppose that this difference would continue through all stages of the crop, but it *ensures that early growth* which will generally secure the plants from unseasonable frosts, and thus give us a crop.

These results so much increased our interest in the article, that we made investigations sufficient to satisfy us that the article is really what it purports to be,—that is, *bones dissolved by sulphuric acid*, by a process so perfect as to preserve *all the animal matter* contained in the bones as well as the bone itself,—and that no other matter is introduced to increase the bulk and lessen the fertilizing power of the principal agents.

In November last, we applied 200 pounds to an acre of exhausted pasture, upon which we intend to sow clover seed as soon as the snow is off, and harrow the ground. We have, also, applied two quarts of the superphosphate to each of 75 young apple trees that stand in grass land, scattering it over a diameter of 12 feet immediately under the tree. The results of these experiments will be carefully watched and reported to the reader.

NEW METHOD OF SMELTING IRON.—A Belgian is reported to have discovered a new method of smelting iron, which promises great results. The essential principal consists in a process of exhaustion in preference to a blast. The result is that less time is required to liquefy the metal than in the ordinary process; that when cast it is surprisingly superior in quality to ordinary iron; that, bulk for bulk, it weighs much heavier; and that excellent cutlery can be forged at once from it, without the intermediate process of conversion into steel. A leading English iron master is building a furnace for smelting on this new plan, and specimens will ere long be in the market.

WEIGHT OF MANURE.—A solid foot of half-rotted manure will weigh, upon an average, 56 pounds. If it is coarse or dry, it will average 48 pounds to the foot. A load of manure, or 36 cubic feet, of first quality, will weigh 2,016 pounds; second quality, 1,728 pounds. Weight to the acre—eight loads of first kind, weighing 16,128 pounds, will give 108 pounds to each square rod, and less than 2½ pounds to each square foot. Five loads will give 63 pounds to the rod. An acre containing 43,560 square feet, the calculation of pounds per foot, of any quantity per acre, is easily made.

LEGISLATIVE AGRICULTURAL SOCIETY.

REPORTED FOR THE FARMER BY D. W. LOTHROP.

The eighth meeting of the series was held on Monday evening last at the State House. The subject for discussion had been announced to be, *Fruit Culture*; but Mr. Wilder being absent and indisposed, Mr. Flint, Secretary of the State Agricultural Board, called the meeting to order, when a motion was carried to postpone the subject of Fruit Culture and adopt that of *Sheep Husbandry*.

Mr. FLINT, being in the chair, made a few introductory remarks. He said sheep husbandry was important, generally, to the farmers of New England, and had been to those of Massachusetts; but in this State, within the last twenty or thirty years, it has declined. The cause of this, he thought, was to be found mainly in the introduction of the fine-wool Merinos, and their subsequent crossing with our common sheep, so that neither fine nor coarse wool was the result. Dogs were also a great drawback to sheep-raising; but now we have a stringent law for its protection. In the eastern part of the State the raising of mutton is a profitable branch of business, and for this purpose he recommended the Cotswolds and South Downs. He would not enter fully into the description of the various breeds of sheep—leaving that to others—but in the western part of the State he advocated the Merinos for their fine wool. Some farmers had thought that sheep improved the pastures where fed, but in our western counties complaint had been made that they run them out. Upon this point he hoped others would speak.

Mr. HOWARD, of the *Boston Cultivator*, observed that much improvement had been made in sheep husbandry—particularly in a national point of view. English poets had sung of the beautiful white flocks of their land as the glory and strength of the nation, and he thought there was much truth in it. Lavergne, a French writer, had had his attention arrested by the greater number of domesticated animals in England than in France, particularly of sheep, and was favorably impressed with their economy, though some others thought differently. Throughout Great Britain—a territory only one-third larger than some of our States—there were fifty millions of sheep; and they are raised for the purpose of occupying and improving their waste lands, which abound in Wales and Scotland. They have been kept on the same soil for years, and it has sustained them. Mr. H. spoke well of sheep manure, and considered the question as to sheep running out the pastures in this country. In England, sheep pastures are continually increasing and improving; but here our summers are very hot, and suffer for want of moisture, and this condition is aggravated where they are fed too closely, as is often the case. Nev-

ertheless, sheep have a tendency to improve the land in spite of close feeding.

Mr. FEARING, of Hingham, observed that if the man who made two blades of grass grow where only one grew before was a benefactor, so was he who advanced sheep husbandry. He would look at the subject in a moral point of view. Our young men were leaving the towns and rushing into the large cities for business; yet we have now too many merchants, lawyers and physicians, and need more men who earn their bread by the sweat of their brow. Small places are going down and large ones rising. After the closing of the war, many of our young men may feel like emigrating; but we must try to retain them by offering them inducements to remain and cultivate the soil. Having some land much neglected, Mr. F. observed, he was induced by Daniel Webster to place sheep upon it. Accordingly he rebuilt his walls, and placing two rails upon them, introduced sheep; his neighbors did the same. Dogs were troublesome; yet in Hingham they had clubbed together and fought them out with good results. As to the effect of sheep on the pastures, he thought well of them. He had one of twenty acres, covered with briars and bushes, which he burnt off and put in sheep, where they did well, though his neighbors said they would starve; the briars have disappeared. He thought sheep profitable; would prefer hills for pastures; said rain storms injured sheep, and advocated warm barns with good keeping. The South Downs he regarded the best breed, and their wool was good. They should be kept in flocks of twenty-five or thirty, and his own were healthy from good keeping. Lambs for the butcher, about four months old, brought him three dollars apiece—very cheap. The wool from his South Downs ranged from six to ten pounds. Mr. F., also, again alluded to his sheep barn, which was 20 by 40 feet, with ten feet posts, and an alley running through it, with sheep each side, and their feeding arrangements so constructed that only one could put in his head at once, and they were all fed from the centre. Such a barn could be built for about \$250.

Mr. ANDREWS, of West Roxbury, said he had had some little experience in keeping sheep, which might, however, be regarded as accidental. Having planted cow cabbage and rape for thirty cows, it was complained that the cabbage hurt the milk, and this induced him to purchase ninety sheep to feed it off. He spoke well of the profits of sheep—giving some statistics—and concluded that cows could not come up to them. They also improved the pastures where fed, and their manure was very valuable, as was shown on his own land. He closed by reading an article upon this subject from the *Boston Cultivator*, copied from the *Genesee Farmer*.

Mr. WETHERELL, of Boston, alluded to a farmer in Hampshire County, who purchased seventy-five or eighty Cotswold sheep at four cents per pound—his object being to test sheep-feeding over that of oxen, and he felt encouraged. He could sell their carcasses at eight cents per pound. Allusion was also made to another gentleman who raised lambs of the Oxfordshire Downs, and could sell them for \$5. This breed he thought better for raising spring lambs than the South Downs; but the speaker believed both were good. Why pastures in which sheep were fed were better than those where cattle were kept, was in a measure attributable to the fact that the sheep were kept in them the most of the time, and to the more equal diffusion of the manure. Farms far from a railroad or market, he observed, had been nearly depopulated of men, and those of the best quality. Poor land with no market was intolerable. In such places sheep husbandry might do well; let a man raise hay enough to feed in the winter. Forest trees are not profitable on poor land, but raising sheep might be, if the land were not too wet. An acre of corn would buy all the coal a farmer would use in winter. There was some profit in growing wool, but more, in raising mutton.

Dr. LORING, of Salem, admitted that sheep husbandry in Massachusetts had greatly declined within half a century. But what is the cause of it? Mr. Flint attributed it to the introduction of fine-wool sheep, and their degeneration by crossing. But the speaker thought differently, and observed that sheep felt their feeding and treatment very much. Farming declined some years ago in Massachusetts, and sheep felt the decline first. They became very small, and were abandoned. Dogs, he thought, not so great an evil as some; sheep will flourish in spite of them. The first question to decide is—What shall be the kind of sheep? And, deciding this, they should be kept for profit and not for pleasure. The fine-wool sheep are the best, but large sheep are profitable in rich districts. Yet he doubted whether for the ordinary farmer the coarse wool sheep was the best. He spoke of the Merinos, and the Atwood breed of Vermont. They were cheaply kept—100 eating only 15 tons of hay in the winter. The fine-wool sheep were the best, and he believed no one could gainsay it. Allusion was made to Mr. White, of Framingham, as to the raising of mutton, which was very cheap—Mr. W. getting only from \$2.50 to \$3.00 per head. Men do not live on mutton, and the fore-quarters were unprofitable. Nevertheless, the hind-quarters were very good. But can we afford thus to raise mutton? Dr. L. spoke of a man in Essex county, who had large, coarse sheep, which he fed at a loss during the winter. Generally, sheep were easily kept, but too many Cotswolds in a flock would deteriorate.

Mr. FEARING thought Dr. Loring wrong about dogs. The loss of sheep by them was in some places discouraging. One hundred thousand dollars' worth in Ohio had been destroyed by dogs. He thought wool and mutton should go together, and fine wool alone he regarded as unprofitable.

Dr. LORING thought dogs a nuisance, but the evil laid deeper. To a question as to what Merino lambs were worth, he replied that fine-wool lambs were not to be sold to the butcher, and mentioned an anecdote of a little boy in Vermont who was taking his pick from some of his father's flock, and having done so, gave his father a ten dollar bill! The latter said it was a good investment.

Mr. WETHERELL again advocated the raising of mutton, and said the fore-quarters of sheep were as digestible as any other, and were used by invalids. We might as well inquire what became of the fore-quarters of beeves. To an extent he favored the raising of large, coarse sheep.

Mr. ROBERTS, of Lakeville, said he had some Oxfordshire Downs, and likes them very much. He sold his lambs from \$3.75 to 4.50. From his ewes he got about 8 pounds of wool, and from his bucks 9 to 12. They were more profitable than crops, and he regarded his breed the best. He did not feed his pastures close, but moved his flock from one to another.

Mr. HOWARD spoke of the weight of the fleece of the Merino sheep; it was great, but there was great shrinkage, as it secreted a large amount of animal oil.

The time for closing the meeting having now arrived, the chairman announced *Fruit Culture* as the subject for the next discussion, when the Hon. MARSHALL P. WILDER is expected to preside.

THE FLAX AND LINEN TRADE OF IRELAND.—Belfast, the great emporium of the linen trade, exported in 1860, 65,600,000 yards of linen, and 13,200,000 pounds of yarn and thread. Next in importance to the flax industry, is the trade in sewed muslins, employing about half a million of persons in Ireland. Another manufacture, carried on in Belfast, is important in the consumption of agricultural produce—namely, starch making from wheat. Ten firms use nearly 240,000 bushels of the finest red wheat every year. The weaten starch made by the old fermentative process, is largely used by bleachers, the goods retaining their stiffness longer than if dressed with the rice and other starches. The whole of this business is at present nearly paralyzed, as America was the best market for Irish linen goods, very limited quantities of which have been imported during the past nine months.

THE WIRE WORM.—At the discussion of a farmers' club in Buffalo, Ill., Mr. Franklin Reed said that the ravages of the wire worm could be prevented by putting half of a fresh cob in each hill. The worms would work into this, and leave the corn.

For the New England Farmer.

WATER.

MR. EDITOR:—I have had a little unfortunate experience connected with pipe-laying for an aqueduct; and as a relation of that experience may save somebody from making a similar blunder, and may possibly suggest to many how they can save much labor by a slight expenditure, I will, with your permission, tell my story, hoping also that some one among your scientific readers may be able to enlighten me as to the precise nature of my blunder. When I first came to the place I now occupy, there was for most of the year a flowing spring near the foot of a hill about thirty rods from my house, and in fact there was about an acre of ground kept so wet by a general springiness on the upper side, that none but the poorest of water grasses would grow there. After a few years it occurred to me that, by bringing this water through a pipe to my barn, a double advantage would be secured—the land would be drained, and an easy supply of water furnished for the use of the cattle.

A well was dug about eight feet deep, and a pipe laid, with a drain to carry off surplus water when it should come within four feet of the surface of the ground. Following the course of the pipe, the land descends about fifteen feet in ten rods: then rises again seven or eight feet, then falls slightly till it reaches the place where the receiving tub stands. The water flows through a half-inch lead pipe, the fall, when the water is highest, being five or six feet in coming a distance of thirty rods. With this fall, the pipe will carry at least, four hundred gallons in twenty-four hours. Three-fourths of this is taken away by a waste pipe into a drain about two rods long, and three feet deep, nearly filled with stones, whence it is readily absorbed into the surrounding soil.

I am now satisfied that I made a blunder in laying the pipe so near the surface of the ground, some parts of it being less than two feet deep. I have mentioned that there is a small swell in the ground over which the pipe passes. Of course, the pipe is, for a short distance, higher there than on either side of the swell. Now it happens every season, at the time when the ground is warmest, (and usually at the same time the fountain-head is lowest, and the current less rapid in its flow,) that the delivery of water gradually diminishes and finally ceases altogether, even though there are at the time two feet of water in the well. But on attaching a pump to the pipe, and pumping for half an hour, the water will again flow for a week or two, when the same operation has to be performed over again. In my ignorance I can account for this interruption only by supposing either that some of the gases that are always mixed with water, become separated by the warmth of the water, and rise and remain in the highest part of the pipe, accumulating there till the water is entirely cut off, or else that the effect is produced by the accumulation there of hydrogen gas set free in the oxidation of the lead of the pipe.

At any rate, this is the practical working of the pipe. In the latter part of summer the water has uniformly stopped running, even with more than two feet of water in the well; while at the present time, (middle of February,) though the spring has been, since September, lower than I have ever be-

fore known it, the water continues to flow, though so slowly, that it can hardly be detected, not amounting to more than two pailfuls in twenty-four hours.

But even with this drawback, I consider the aqueduct among the most valuable and best paying improvements of my farm. Without any labor or care, there is always ready for use a liberal supply of good water. The expense in this case has been less than the cost of a well and pump would have been. The cash outlay was only about thirty dollars.

Now I believe it would be found, on examination, that a large proportion of the barns of New England might be supplied with water by means of springs and brooks. Where these happen to be on high ground, so that the flow will be direct, so much the better; but science has given us, in the hydraulic ram, a power that will enable us to compel water to run up hill, and so we can take advantage of streams or copious springs much lower than the place where we wish the water delivered. And I believe a judicious expenditure for this purpose would soon be repaid in the saving of labor.

M. P.

For the New England Farmer.

NOTES AND INQUIRIES.

PAINTING THE ROOF OF BUILDINGS.—Upon page 32, January number, current volume *New England Farmer*, is an article about "Important things to know about building," which is suggestive, and upon an important subject; one upon which too little thought is given, in many instances, by those who are erecting buildings for their own or others' use.

It is a too true saying that a large majority of our buildings are built for show, and the present only; especially those built by Yankees; but the day of these things, it is hoped and believed, is fast passing away. But the question is, Whether painting the roof, or shingles upon the roof, is useful, and as much so, as upon the walls of a building?

It is claimed by many who have tried it, that the shingles painted, instead of being "done for a lifetime," as contended, will not last any longer than if not painted, where the paint is put on after the shingles are all laid, and some even contend that they will not last so long as without the paint. I have seen shingles that had to be removed, that were painted, because they were so rotten that they were more like sieves, as far as keeping the water out was concerned, than like a shingled roof; and still to stand and look upon the roof it was "fair to behold"—apparently but little the worse for wear.

The reason assigned was, that the water came in contact with the shingles above where the paint was applied, and followed down under the paint, where it was retained much longer than it otherwise would have been. Consequently, they were kept moist, and soon began to decay upon the under side and in the middle, instead of drying, as they would, had not the water been prevented from evaporating by the paint upon the lower ends only.

How does this accord with your theory and experience, Mr. Philbrick?

The remedy is to paint each course as laid, up

above the ends of the second course, with a thick, heavy coat of paint, and then, to finish off, paint the portion exposed after the roof is thus finished. Then, what water falls through the interstices will fall upon a painted surface, and be conveyed out, instead of following the grain of the wood down under the paint.

PEAT OR SWAMP MUCK.—Will it pay to haul peat two miles on a good road where a yoke of oxen can haul half a cord, spaded up directly from the bed? The muck to be composted with stable manure, or otherwise, used upon an alluvial soil of naturally very good quality. The soil has been much reduced in productiveness by former occupants. The peat was pronounced, in 1837, by Dr. Charles T. Jackson, "excellent peat, of a remarkable character, it being in part bituminized by the process of decomposition." It lies upon a hard, gravelly bottom, gradually deepening towards the centre.

O. W. TRUE.

Elm Tree Farm, near Phillips, Me., Jan. 31, 1862.

REMARKS.—We have no doubt it will "pay," if the work is economically done, by hauling when other important work is not pressing.

USE OF HEN MANURE ON CORN.

I have been in the habit of using hen manure, applied in the hill, on corn, for a number of years, with excellent success. I take my hen manure to a convenient place—say a barn floor, and pulverize it thoroughly—then mix two-sixths ashes and one-sixth plaster, with an equal proportion of the manure in bulk, of both ashes and plaster. After preparing my ground by spreading, say twenty-five cart-loads, of stable or other good manure on the turf, and plowing it under, I mark out my ground without either harrowing or bushing, and then drop one gill of the above mixture in each hill, either planting my corn beside, or kicking on a little dirt with my foot, over the mixture, and planting directly on it. I row both ways, three and one-half feet apart. In this way I have succeeded in getting fine crops. I generally use about fifteen bushels of the hen manure mixture to the acre; but if I used no other manure to carry out the crop, I would certainly use at least forty bushels of the same. I think most farmers miss it in running over too much ground to get a bushel of corn, when by manuring heavily, they get the same grain on less ground, and make a saving in labor, and leave the soil in a better condition for stocking down.—E. ALLEN, *Pomfret, Conn., in Country Gentleman.*

PREVENTIVE OF THE CURCULIO.—Mr. A. C. Hubbard, of Detroit, publishes in the *Michigan Farmer* a statement that "common" elder bushes tied to the branches of plum trees had prevented the operation of the curculio for three years, in a garden he recently visited. His friend had been upon the place five years. The first two years he tried to save his fruits by shaking the insects upon cloths, with but poor success. "An old Frenchman" told him to put elder bushes in his trees. He has done so for three years with the same success—a full crop of perfect fruit. The bushes were put into the trees every few days from the time the fruit was set until full grown.

For the New England Farmer.

THE CULTIVATION OF WHEAT.

J. PALMER, ESQ.,—Sir:—Your letter of inquiries respecting winter wheat has been received, in which you say "you have cultivated winter wheat upon a small scale the two past seasons, and that it has not been injured by the midge; but that you find it difficult to get the corn off the land in season to sow wheat, and seed down to grass; that you cut up your corn as soon as it will possibly answer, and remove it from the grounds, and shock it, which is a good deal of labor; and further say, you should prefer to sow spring wheat if you could obtain some that the insect would not injure, and ask if I know any such?" I know of no variety of wheat, either winter or spring, that is midge proof, though it appears that some varieties are less injured by the insect than others.

I have successfully grown winter wheat for the past nine years, on my farm. Spring sown wheat has been a very uncertain crop. If sown early, it has usually suffered badly by the depredations of the midge. If sown late—say the last of May—it may escape the insect, but has been pretty sure to rust, mildew or blight. My farm lying in a valley, the wheat crop is more liable to injury from rust, mildew, &c., than that grown on our hill-farms. But as low-lying as is my farm, I have suffered, during the period I have grown fall-sown wheat, but very trifling loss from midge, rust, or winter-kill. Winter wheat on my farm has been a surer crop than that of corn, oats or potatoes. I have usually sown between the 25th of August and 10th of September. By early sowing, the plants are less liable to winter-kill, and obtain an earlier start in the spring, thereby getting ahead of the midge, rust, &c.

The Japan wheat you ask about is the earliest winter wheat I know of. I cut a part of mine the 12th of last July; it does not stand our winters so well as some other varieties, but it never has been injured by the midge, nor rusted in the least. From its early ripening, it was badly injured the past season by whole troops of yellow birds, who *shelled* it badly, while the grain was in the milky state. It is a red wheat, beardless, but makes a very good quality of flour. I have sown the past fall quite a patch of it, and shall know, another harvest, whether it will be a profitable variety to cultivate.

You ask what variety I consider the safest and best. I have grown Gen. Harmon's "improved white flint," the Tuscan from Michigan, Early Noe from France," and on a smaller scale, a dozen other varieties, all of which have done well. The past season I grew fourteen different varieties; two of the latest kinds were somewhat injured by midge and rust. The white flint gives forty-seven pounds of superior flour per bushel; some of the others not quite as much. The Early Noe makes a very white flour, but bread made of it *dries up* sooner than that from some other variety. I know nothing respecting the Java wheat you inquire about.

I have never grown winter wheat after corn. Cannot get the ground cleared of it early enough. Very much depends upon early sowing; therefore, let oats or barley follow corn, then manure the stubble, plow and sow wheat and grass seed. Or

plow a clover-ley in August, top-dress with guano or fine manure, or completely invert greensward. Last of August, roll down the furrows, manure, harrow well, then sow wheat and grass seeds, and clover seed in the spring. If the wheat should happen to fail, you will be likely to get a good field of grass. But more than three-fourths of the wheat I have grown, has been on inverted sod, and usually has done better than that on old ground. I am satisfied that most of our farmers can grow winter wheat with more certainty than they can spring wheat, and that it would be better for them to raise wheat for family use, than to purchase western flour.

The varieties of wheat I have grown, as field crops, have all, except the Japan, been "white, bald wheats;" these make a whiter quality of flour than the red chaffed and bearded wheats, but I am not sure as these "white, bald sorts" are as hardy and productive as the bearded varieties.

In August, 1860, I forwarded to Col. A. G. Boyd, Hancock, Md., samples of five varieties of winter wheat, which he sowed in September, 1860. In August last I received a letter from Col. B., in which he says: "All the varieties of wheat you sent me last fall, I observe are smooth (bald.) There is existing among our farmers a prejudice against smooth wheat, and I am beginning to be of the opinion that it is not without substantial reasons. Certain it is, that our smooth varieties are more subject to the ravages of the fly and other insects, and to the elemental diseases incident to the wheat crop, and yield little or nothing, whilst the bearded varieties, with few exceptions, escape the insect and these diseases, and yield remunerative crops."

I have grown from 10 to 16 bushels of bald wheat from the bushel of seed sown—and some of our farmers have done better, getting 20 or more to the bushel of seed. But among the dozen varieties of wheats I experimented with (in drills) the past season, four of them were bearded wheats. While growing, and when harvested, I was satisfied that the bearded varieties were the most productive, the produce of which has been sown, as well as several other varieties, (14 in all,) and another season I hope to be able to test the correctness of Col. Boyd's views. If the bearded varieties prove decidedly the hardiest and productive, I shall cultivate them in preference to the smooth, or awnless sorts.

I wish I had an opportunity of forwarding you a few heads, each, of the different varieties I grew the past season. It would satisfy you that beautiful samples of winter wheat *have* been grown in the "Old Granite State"—and I am full in the faith it can be done again. Taking a series of ten years, I believe we can grow winter wheat, with as much certainty as it can be grown in any other of the States in the Union, or out of it.

Yours, most respectfully,

LEVI BARTLETT.

Warner, N. H., Dec. 16, 1861.

SOAKING OF SEEDS.—One of the best methods of preparation of seeds for an early start is to soak them in diluted liquid manure. Hen dung is much recommended for this purpose. Sometimes soaked seeds do not come forward, or rot in the ground; but frequently it is the case that the seeds

are not attended to, but are allowed to heat, or sometimes to get dry, before they are sown. Another point is to have, for small seeds, the soil in a warm friable condition; if the seeds are soaked and the surface of the soil is warm, and the soil itself is pressed down close to the seed, by rolling, or the hoe, when the sowing is done, it will make a material difference in the time which they will take to sprout; and besides this, the manure with which their outer coat is saturated, protects them from the attacks of worms and insects.—*Michigan Farmer.*

FEED YOUR CROPS.

Dr. BECCANA, more than a century ago, remarked that "we are composed of the same substances which serve as our nourishment." The same observation applies with equal correctness to plants. Dr. Lee, when Principal of the Agricultural School near Rochester, New York, several years ago, took considerable pains to demonstrate this fact. "He first," says a writer, "analyzes the plant or produce, and finds out what it is made of. He then knows what materials must be supplied to feed it in order to obtain a good crop." He ascertained, by a series of very ingenious and carefully conducted experiments, that one hundred pounds of wheat ashes contained forty-seven pounds of phosphoric acid. In one hundred pounds of the ashes of oak wood, he found there were two pounds of phosphoric acid. In commenting upon this fact, the writer above mentioned says:

"Now how many pounds of dry oak ashes must be applied to an acre to give a crop of wheat, both straw and grain, equal to thirty bushels, and supply it with all the phosphoric matter needed? In order to solve this problem, we must remark that thirty bushels of wheat at 60 pounds per bushel, will weigh 1,800 pounds. One hundred pounds of wheat, when burned, will yield $2\frac{1}{2}$ pounds of ashes. Of course, 1,800 pounds of wheat, will contain $40\frac{1}{2}$ pounds of ashes, and thus $40\frac{1}{2}$ pounds will contain a trifle over 19 pounds of phosphoric acid. To one pound of wheat there is usually $2\frac{1}{2}$ pounds of straw; we shall, therefore, in order to produce 30 bushels of wheat, have about 4,500 pounds of straw, containing 315 pounds of incombustible matter, which, if burned, will be left in the form of ashes. It has been found by experiment that 100 pounds of ashes from wheat straw, contain 3 and 1-10th pounds of phosphoric acid. This 4,500 pounds of straw will contain, therefore, 9.76 pounds of phosphoric acid, which, added to the 19 pounds in the wheat, will make 28.76 pounds. Now, if you want to supply this phosphoric acid by the application of oak ashes, containing 2 pounds in every 100 pounds, you will need 1,400 pounds. A bushel of such ashes will weigh nearly 70 pounds, so that you will want twenty bushels of ashes."

We would here remark, that, in a large majority of cases, probably, the quantity of ashes required to feed the crop of wheat with the requisite amount of phosphoric acid, would exceed this, as it is by no means likely that all the acid would be taken up and assimilated by the plants for whose especial benefit it was designed, when applied. There are a number of ways in which a portion of it might escape, and do very little good to soil a crop; yet the suggestion is of value as tending to direct us in the pursuit of right methods and fortunate results in the management of a valuable and important crop. The analysis of vegetables will undoubtedly prove of value to the husbandman, and some measure ought to be adopted to render the analyses of plants more common and familiar to us.

It is well for the farmer to be familiar with the experiments and theories of the chemist, as they will sometimes lead to the most valuable results, and always lead his mind to subjects of the most pleasing contemplation. But there are continual operations in nature entirely beyond the research of either chemist or farmer. The latter may employ the amount of ashes found necessary by the experiment of the chemist to produce a given quantity of wheat, and yet utterly fail of producing a crop. The farmer knows, however, that when he uses ashes or lime upon his wheat crop, that nine times in ten the crop is better for it. It is this experience, springing up from his daily and yearly practice, that is of the greatest importance to the farmer. The difficulty is, that he does not digest and record it, and pass it along for the benefit of those who succeed him in the same employments.

HORSES.

Col. Needham, the Secretary of the Vermont State Agricultural Society, in his annual report says:

"The number of horses in Vermont before the breaking out of the rebellion, was about fifty-five thousand, since which time it is calculated that nearly ten thousand have been carried from the State for army purposes. This immense levy for horses has been made throughout the entire country. When it is considered that comparatively few of these horses will find their way back; that the number that will die of disease, or become unfit for service, is twenty times as great as it would be, were they used in other kinds of business; that to meet this great want of the government, a large proportion of the business horses in our large cities, which have been thrown out of service by general prostration, have been bought up; it readily appears that, even during the war, horses must advance in price; and at its close, when business shall revive, and trade resume its former channels, the demand for good horses must exceed the supply. Reasoning from these premises, no more profitable labor can be engaged in, than the production of good business horses."

For the New England Farmer.

POTATOES ON MUCK LANDS.

MR. EDITOR:—I have lately turned over the last seven or eight volumes of the *Farmer* to see if I could find any records of experiments with either of the concentrated manures upon meadow lands. The meadow which I have under cultivation produces abundant crops of potatoes, provided each hill receives a small amount of some coarse manure. I might state here, that while every crop I had tried has succeeded—the potato appears, to be the most profitable, and, further, that a coarse manure produces larger and smoother potatoes than compost. For good and sufficient reasons, however, I wish to use the major part of my manure upon uplands, and would be glad to substitute therefor guano, superphosphate, or something of the sort, which, at the same time, might be so much more conveniently applied to lands where no animal can travel without it be shod with *rackets*. I have thought to avail myself of the experience of some of your correspondents, but find nothing upon the subject. Have you not, Mr. Editor, some reader who has experience in the premises and who is in want of a subject whereon to write for the *Farmer*? If so I would like to hear from him.

While looking through the volumes of the *Farmer*, I was reminded of the fact that a great many of your subscribers fail to have their *Monthly Farmers* bound. They are not aware that the twelve numbers, although they may be a little soiled, are made into a very handsome volume by the binder, for the small sum of twenty-five cents. If information is desired upon any particular subject, the reader, by the aid of the index, which accompanies each volume, can compare the views of a score of writers. Let me advise every subscriber to the *Monthly* to have his numbers bound.

Londonderry, N. H., Feb., 1862. M. W. A.

REMARKS.—We have been examining crops of potatoes growing on muck lands, more or less, for the last ten years. They have averaged better crops on such soils than they have on the high lands. Various manures have been used. Fine crops have been produced by the aid of a handful of Peruvian guano, without other dressing—but at \$65 per ton, it is doubtful whether anything can be gained by its use. So good crops have been made by the use of ashes in the hill, or superphosphate of lime. A night-soil, or poultry, compost, on good muck lands, we think would bring profitable crops.

HINGHAM AGRICULTURAL AND HORTICULTURAL SOCIETY.—This young giant has issued a list of prizes for 1862, making in the aggregate the sum of \$750. It is made up of only a single town, but actually outstrips some county societies in the extent and quality of its exhibitions. The officers of the Society are:

President—ALBERT FEARING; Vice Presidents—Solomon Lincoln, Charles W. Cushing, Luther Stephenson; Recording Secretary—De Witt C. Bates; Corresponding Secretary—Henry Hersey; Treasurer—J. H. French; Librarian—L. Fearing

For the New England Farmer.

BARNs AND BARN CELLARS.

I have been perusing your paper of March 1st, and noticed the report of the Legislative Agricultural Society at their seventh meeting. Subject—Farm Buildings. I would like to make some inquiries in regard to the ventilation of barns with cellars under them.

First, If a man should build a room, lay a tight floor, double board the sides, build a good fireplace without any chimney in one side, and then lay a loose floor overhead, and then cover with hay, and build a fire in the fireplace, would he be surprised if his hay should be smoky? taste smoky? smell smoky? or if his clothes should come in contact with the hay, or remain in the room a short time, would they not smell smoky? Is this to be wondered at? I would ask how many barns are built upon the principle of the room above described? Or how many stables are there in the country which are ventilated in the same way? (through the hay mow.) It is not to be wondered at that people complain about ventilation in such barns as have cellars under them; also, about bad hay, or yellow hay, that lays over the stable, it would not be surprising if all the hay and straw that was in the barn should smell or taste a little strong.

Second, A barn that is 40 by 60 feet may be properly ventilated by two pipes, viz.: Place one of them in the vicinity of the stable, which should have a box pipe running the whole length of the stable, with small openings as necessity would require, at the different tie-ups. Then there should be another in the opposite end or part of the barn, and if there should be another stable, there should be another tube running the length of the stable, to unite with the large ventilating pipe. These ventilating tubes, for a barn of the size given, should be two feet square, with a damper (at the lower end) to turn as occasion would require. In no case should they diminish in size towards the top of the barn; to contract the tube at the top would be to stop the draft, but to enlarge the top gradually would increase the draft, and they should be placed as near the centre portion of the cellars as convenient.

Lastly, If any man will follow this last rule, he would not have smoky, yellow, or bad flavored hay, providing it was got into the barn in good condition.

NATHAN WAY.

West Burke, Vt., 1862.

For the New England Farmer.

EXAMINING EGGS FOR SETTING.

As the time of setting hens is near at hand, a few hints may, perhaps, be of some benefit to your readers. Select a warm, dry, secluded place; set four hens, or more, if possible, at the same time, so as to allow one hen to rear the four broods, as it is no more trouble to take charge of forty chicks with one hen, than one-third that number. After setting four days take the eggs from under the hens in the evening, hold them before a strong light, between your hands; if the eggs are good, you will perceive a small, floating ball, which is the eye of the chick, and the eggs will appear thick with bloody veins passing from side to side. Replace such eggs carefully; those that have *not* changed can be used in the family, as they will

not be injured. If you first placed thirteen eggs under each hen or fifty-two under the four hens, you may find upon examination, perhaps, twelve without chickens, which would become what are commonly called "rotten eggs." Place the remaining forty-eight eggs under the three hens, and set the other hen with fresh eggs, and if the hens set steadily, you may expect forty-eight chicks from the three hens.

In selecting eggs for setting, choose those of moderate size, and well proportioned; thirteen eggs is a sufficient number for one hen; you will get more chicks from that number than from more, as a larger number annoys the hen, who will be continually endeavoring to cover them, thereby shaking and often killing the chickens in the eggs.

Salem, March, 1862.

JOHN S. IVES.

For the New England Farmer.

BEET SUGAR.

MR. EDITOR:—In your remarks on my beet article in last *Farmer*, I am glad you led me to correct an error, either of my pen or your printer. Instead of 10 or 12 bushels, it ought to read 10 or 12 cwt. It appears to me that the article you quote from, in the *American Encyclopedia*, has been, by the compilers, copied from Loudon, and that he wrote when the production of sugar and brandy from beet was in its infancy, and hence the discrepancies with regard to quantity and results, &c. It must also be borne in mind that the boiling of the pomace, or pulp, before pressing, adds a third more of syrup, and that is but of recent introduction in the manufacture of beet sugar; and a great many still adhere to the old system of pressing the pulp cold, as it comes from the mill. I have seldom found two people to agree about the quantity of the raw material required to produce a given quantity of sugar, even in the sugar-making districts of France; and in my own experience I have found the quantity vary from 8 to 16 cwt. of clear roots to the cwt. of sugar. This variation is scarcely to be wondered at in a new branch of business however, when malted barley, under the hands of old and experienced brewers, often produces like variations of quantity and quality of ale, under certain circumstances.

I have more than once seen whole pressings of hundreds of gallons rendered almost useless by the too liberal application of lime and sulphuric acid, when a third part of each was only necessary, and a few drops of the oil of violets administered at the critical moment, would have saved the whole mess. The quantity of molasses has also to be taken into account. The more molasses the less sugar, and the more sugar the less molasses, which has to be regulated by the application of chemical agents, upon which much depends in the manufacture of a good article. The whole economy of the thing consists in adapting means to ends, and having the different departments work in perfect harmony. For example, the sugar manufactory and the distillery ought to be united, as molasses and other refuse of the sugar is good enough for distillery into brandy. The pulp, after being pressed, is sold to the paper-makers, and brings a good price, as it is found to make the best and most durable paper, and is much in demand for that purpose, in many parts of Europe. The *Lon-*

don Times, the largest journal in the world, is printed on beet paper, of which they consume seven tons per day, or 2555 tons per annum, at a saving to the proprietors of \$100,000 a year.

So the beet, duly considered, is a most useful and wonderful vegetable. Its adaptation to transformation into so many articles of use to man, seems without limit, and is, therefore, astonishing to contemplate. Beef, pork, mutton, milk, butter and cheese, sugar, brandy and paper, are but a few of the articles into which this root can be transformed, and time is only required to develop its future usefulness in this wide country, to the wants of man.

I have written to France for fresh information regarding the quantity of roots required under ordinary circumstances to produce a given quantity of sugar, &c., and when I receive an answer I will lay it before you. And in the meantime, I remain respectfully,
THOS. CRUICKSHANK.

Beverly Farms, March 4, 1862.

For the New England Farmer.

FARM BUILDINGS.

MR. EDITOR:—In a report of the Legislative Agricultural Discussions upon farm buildings, several very important points were brought out, and I refer to them, hoping to elicit more valuable suggestions upon the same subject.

Shall we not have the diagram of the position of farm buildings, with explanations, hints about size, construction, &c., presented by the Editor of the *Farmer*, at said meeting, at an early day, in the *Farmer*?

I confess to a liking of farm buildings being connected and being under as few roofs, as a general rule, as circumstances will allow, thinking the conveniences and economy in labor in and about them, more than equal to the disadvantages arising from their connection, beside the saving in walls and roofs.

In the "shelter" required for buildings, do they not need the rays of the sun, the "balmy breezes," the south-east storms, modified, in the southern aspect, as well as in any other direction, though to, perhaps, a less amount? And here, in reading your remarks, the fact occurs to mind that the pine is injured by winds more than the other evergreens mentioned; (here in Maine, at least.)

It is a subject of thought, how to have a suitable shelter around the buildings, and not obstruct the view of the fields and pastures, where the building site is nearly on a level with them, which by some is considered one of the important requisites to have a full view of the fields from the buildings.

Would you have shade trees, which grow to a large size, set out so near to buildings, that in case they should be blown down, they could fall upon the buildings? Though no serious accident of this kind is just now called to mind, yet when seeing maples, elms, pines, and the like, growing within a few feet of the house, a feeling of fear would steal over me that in some of our New England gales, some of the large branches, or the whole top, might be wrenched off and hurled upon the roof with a crushing weight.

Why does Mr. Fearing think it "not good economy to paint" his sheep-sheds, as well as other out-buildings?

That "new kind of paint" of Mr. Taylor's.—Such a description as given in the report viz., "the base was whitening, with perhaps a little lime and oil, with colors to suit," is, to say the least, quite indefinite. If you know the import of *perhaps a little lime and oil*, and what really made up the bulk of the paint, with the base, I shall be glad to receive more light. If such a paint, or wash, as there referred to, can be procured, it is truly a desideratum—an improvement worthy of the nineteenth century—one which many a toiling farmer will be thrice glad to obtain, and to test, upon the weather-beaten walls of his buildings.

Near Phillips, Me., 1862.

O. W. TRUE.

REMARKS.—The diagram we presented was improvised for the occasion, and was intended only to show the position of the buildings in their relation to each other.

Shade trees should never come so near the buildings as to exclude all the rays of the sun, either in summer or winter. On the north, they may be nearer than on the other side. Elms and maples should be fifty feet from the dwelling, and all trees should be so arranged as not to obstruct any prospect that is valued.

For the New England Farmer.

SMITH'S IMPROVED FENCE.

MR. EDITOR:—As you have Smith's Improved Fences upon your farm, I wish to inquire whether, in your opinion, his fence No. 2 can be advantageously used, as a road fence, to prevent snow-drifts?

The answer to this question will concern every person who is obliged to pass over our roads in winter. If his fence has this advantage, and no other, I will guarantee him patronage enough in this State to satisfy any reasonable man.

Over a great part of the State, and during the greater part of the winter, our common roads have been literally buried under immense snow-drifts, and the only way to get through them has been to dig through; and after every driving storm, we have been compelled to do the same over and over again.

Thousands of dollars will not pay the cost of keeping our roads open the past winter, and business over them has been about as brisk, as it usually is on the coast of Greenland. Upright road fences are the cause.

VERMONT.

Burlington, Vt., March 6, 1862.

REMARKS.—See cut and description of Smith's Fence in another column.

GOATS.—An article upon Goats, recently published in the *Farmer*, has been extensively published and commented upon. We did not think it necessary to say at the time, that if a person has a tree or a plant which he values, he must not allow goats to run at large. They are exceedingly destructive to nearly all kinds of herbage, and will surmount almost any obstacle to get at it.

For the New England Farmer.

SEED WHEAT---FARMERS' CLUB---A SNOW BLOCKADE.

MR. EDITOR:—In a communication in the *Farmer* some months ago, either the printer or scribe made me say just what I did not intend, namely, that the farmers hereabouts sowed only the largest *kinds* of wheat, when it should have read the largest *kernels*. For a few years past the "Canada Club" and "Scotch Fife" have been almost the only kinds sown, although formerly the "China Tea" wheat and other large varieties were raised considerably. By the use of an improved fan-mill, which separates the largest, plumpest and earliest ripened kernels from the smaller, as well as from all foul seed and oats, we think we are improving our grain crops, wheat especially, in a perceptible degree, getting a larger yield, earlier matured and less exposed to the midge, and better quality. But we hope your readers will not understand that we sow only the largest kinds of wheat—except as we increase the size of the variety by sowing only the largest kernels.

FARMERS' CLUB.

That you may be better acquainted with us, farmers, I will give you a little specimen of our talk at the second meeting of the club, which was organized two weeks ago for the following objects, as named in the 2d Article of the Constitution:

1. The acquisition and dissemination of agricultural knowledge.
2. The promotion of acquaintance among neighbors.
3. Improvement of its members in conversation, composition, public reading and speaking, &c.
4. Improvement of farms, farm implements, stock, buildings, and every department of agriculture.

Our first subject for conversation was the comparative merits of fall and spring plowing. Mr. G. recommends fall plowing as to economy, destroying grubs, &c., enriching the soil and saving of labor preparatory to the hurry in getting in spring crops—would plow greensward soon after haying when the ground was warm—believes fall plowing gives heavier crops—in favor of spreading manure on the surface and harrowing rather than plowing under very deep—thinks the little loss of ammonia by plowing corn or grain land in the fall more than compensated by the manurial effect of the stubble.

Mr. — prefers to break greensward for planting after the grass has well started in May—does not think fall plowing destroys grubs or foul weeds any better than spring plowing—has his doubts about getting as good crops from fall plowing of stubble land—for wheat is in favor of both fall and spring plowing—thinks if *all* plowing could be done as conveniently in spring it would be better, except plowing in greensward in August when weather is warm, so that the rowen heats and rots considerably before cold weather.

Mr. G. is quite confident that fall plowing destroys larvæ—don't think fall plowing of corn land manured in the hill injurious—not much lost if plowed late.

Mr. — don't profess to be much of a farmer, has some ideas—thinks we don't generally plow enough to sufficiently pulverize the land—much in favor of both fall and spring plowing—says farmers

in H—k get from 75 to 100 bushels of oats per acre, and plow old land both fall and spring—likes breaking greensward in August—and is satisfied from personal experience that the more we plow and work over land, the better crops of every kind.

Mr. — thinks we sometimes get land pulverized too much—in regard to seeding down thinks the greater growth of straw is from spring plowing, but more weight of grain from fall plowing—never saw oats eaten up badly by worms or insects on fall plowed land—is in favor of breaking greensward early in the fall—has lost new seeding by sowing on land pulverized in the spring; Mr. — endorses the same opinion.

Mr. — thinks our crops depend more upon manure than the time of plowing—especially land for seeding down should have been well manured and thoroughly pulverized—is in favor of getting muck, &c., and preparing manure instead of plowing in the fall—thinks, if can plow but once, better do it in the spring—in favor of plowing greensward for corn the last thing before the ground freezes up—not generally in favor of plowing corn stubble land in the fall for wheat the following year.

Mr. — thinks seeding down depends more upon the thickness of the grain sown with the seed than on the time of plowing—in favor of fall plowing to get of "sward-worms."

Mr. — thinks that broadcast sown grain is less liable to rust on fall plowed land because the sward is better decomposed—thinks in one instance he raised oats on a field part plowed in fall and part in spring, and the fall plowed yielded one-third more grain and equal amount of straw, seeding caught better and produced better hay crops than the other—thinks fall plowing, especially for moist land, pulverizes it better, on account of frost, &c.

Mr. — is in favor of fall plowing for wheat after corn—also for seeding down—would like further discussion of this subject.

Thus you have, Mr. Editor, a sample of our first meeting after organizing; do you think it advisable to try to keep it up? We have decided to have at least one more meeting, and the subject is the "corn crop." I don't know that any one of us ever had any experience or practice in any other club, so that of course we are all "green," though as a community we don't like to be be rated more than others, or considered "below par" in general and our pa in particular! It is our intention to have our wives and older children associated, actively with us, and our hired help in the club, and besides conversation, occasionally have original essays and speeches.

THE BLOCKADE.

I don't know how you of the cities and port towns regard it; we in the suburbs of central Vermont, are united to a man, to say nothing of the women, in our determination to exert ourselves to raise it by persuasion or force, hook, crook, or shovel, if it is not removed within thirty days! We care not whether by England or France or Greenland the blockade is raised and lemonade and our neighbors made accessible, and our commerce let loose, so be it is soon done. Why, sir, just think of it—ninety-one inches of snow before the fourth week in February! And then, for the

last six weeks, Major General Boreas and all his host have been here on furlough amusing themselves for the mere sport of it in piling it up in the most inconvenient ways imaginable. Within six feet of the room in which I write they have left a pile ten feet deep before the door, and there are many piles in the highways which would allow of having a road cut through them sufficient for a double team to pass out of sight a considerable distance. Last night was the most severe within the memory of the oldest inhabitant, the aforesaid company doing their *awfulest*, while the mercury varied from 38° above to 6° below zero. A townsman coming to the centre between seven or eight o'clock in the evenings got his horse set in a drift within ten rods of the main street, and while he was going on for help through the flying snow, lost the track, became exhausted and would have perished, but for his protracted calls for assistance, although on the corner of three streets and houses all around. My neighbor the doctor says he has a drift in his garden thirteen feet deep! Such being the facts, shall we be branded "Secesh" if we berate the blockade?

R. N.

Steady-habits, Feb. 24, 1862.

CLIMBING PLANTS.

There is nothing that adds so much to the external appearance of a city residence as a climbing plant or two. We know of no ornament so cheap and tasteful, and none as equally appropriate to the mansion and the cottage. There are climbing plants hardy enough to live and thrive without much care, and they require so little soil that every one who has possession of a square yard of ground can sit under the shadow of his own vine. The cheerless expression of walls that present only a succession of clapboards or bricks may be relieved by these best of nature's ornaments. The drapery of leaf and blossom about the windows, the vine climbing up to the very eaves and thrusting its tendrils into every crevice, the rustic trellis at the doorway almost hid by the rich foliage, are evidences of taste that should be multiplied. Mr. Downing beautifully says, "What summer foliage is to a naked forest, what rich tufts of fern are to a rock in a woodland dell, what hyacinthine locks are to a goddess of beauty, or wings to an angel, the drapery of climbing plants is to cottages in the country;" and, he might have added, to residences everywhere.

The following climbing plants will be found to answer the requisitions in situations where hardness and vigorous and rapid growth are indispensable. We rank the roses first, for no one ever wearies of them. The Queen of the Prairies and the Baltimore Belle are two fine varieties of the Michigan rose. They are remarkable for the profusion of their flowers and the rapidity of their growth, shoots of twenty feet in length in a single year being not uncommon. The blossoms of the Queen of the Prairies are a deep pink with a white stripe in the centre of each petal, and so very double that they look like large pouting buds, rather than full-grown roses; those of the Baltimore Belle are almost white, and in large clusters. Mr. Downing recommends the common Boursalt rose, which he says "has long purplish shoots, foliage always fresh and abundant, and bright purplish blossoms in June, as thick as stars in a mid-

night sky." The richest and prettiest Boursalt is one called Amadas or Elegans.

The *Chinese Wistaria* is another plant admirably adapted for the decorations of dwellings. It is perfectly hardy, a rank grower, and may be trained over the whole side of a dwelling, or twice about a single pillar. It requires some age and a favorable location to flower, but the flowers are worth waiting for. They hang in clusters, like those on a locust tree, are from six inches to a foot in length, and of a most delicate tint, between light purple and white. When in full bloom, it is one of the most beautiful flowering plants.

For twining about windows, nothing is prettier than the Chinese twining honeysuckle, (*Lonicera japonica, flexuosa.*) It blooms constantly nearly all summer, and its fragrance is peculiarly pleasant. It is not so hardy as the roses mentioned, but may be cultivated with a little care. The red and yellow honeysuckles, planted together, give a very fine effect, especially when trained on a lattice. Mr. Downing speaks of the sweet-scented clematis (*C. flammula*), "as the very type of delicacy and grace, whose flowers are brodered like pale stars over the whole vine in midsummer, and whose perfume is the most spiritual, impalpable, and yet far-spreading of all vegetable odors."

All these climbing plants may be trained on the sides of dwellings by an occasional fastening to the wall. The honeysuckles, being more fragile, need the support of strong twine. All the preparation necessary is to dig a trench a little distance from the wall, fill it with rich soil, (for the richer it is, the more luxuriant will be the growth,) and plant the root, the cutting, or the seed, as the case may be, and the thing is done. These may be obtained at a trifling expense from any of the nurseries or green-houses, and once obtained, your stock will never need renewing. They will add to the beauty of the most delightful residence, and impart it to those lacking in all ornament. The old house which you begin to talk about tearing down, will look quite well for a year or two longer, if you will rejuvenate it by this drapery of living green. The blank, broad side of a building which stares into the street, with its great expressionless face, will wear a very different countenance, if you will build a simple trellis over the front door, and cover it with some graceful creeper.

There are situations where the European Ivy, the American Ivy, and the trumpet creepers, (*Bignoniæ*), have a fine effect. This class of plants help themselves in their upward course, fixing their rootlets into the stone or brick wall. The European Ivy is tender, but the American or Virginia creeper, and the trumpet creeper, will thrive anywhere. They show to good advantage on the rear of brick or stone cottages, on the side of some old out-building which cannot be improved in any other way, on a walled terrace, which often divides the doorway from the garden, and on rude walls and fences generally.

We trust we have not wearied our readers with this plea for ornament. Every consideration which should lead to giving an air of cheerfulness and repose to the apartments of a residence, every motive which impels us to beautify the walls that shut the cold, common air of the world out, and the genial, peculiar air of social enjoyment in, also urges us to make our homes externally tasteful, beautiful and characteristic.—*Buffalo Courier.*

EXTRACTS AND REPLIES.

PROFIT AND LOSS IN POULTRY RAISING.

As you had the kindness to publish my account for the year 1860, as to profit and loss of poultry raising, I now send you the items per month for the year 1861, and should you think it worthy of a place in the *Farmer*, for the benefit of those interested, please make it public.

Brahma Pootra fowls and Muscovy ducks are the breed.

STOCK, FIRST OF EACH MONTH.

	Dozen Facts.	Dozen Eggs.	Ducks.	Dozen Eggs.	Young Chicks.	Young Ducks.
January.....	29	20.1	12	6.3		
February.....	27	22.8	9	9.3	9	
March.....	27	36.8	9	12.6	23	
April.....	27	23.8	9	6.0	19	
May.....	24	21.4	9	9.8	46	7
June.....	24	21.6	9	6.8	63	7
July.....	24	18.11	9	6.0	82	16
August.....	14	13.10	9	1.0	75	34
September.....	9	15.5	5		59	39
October.....	9	15.0	3		36	37
November.....	8	9.9	3	2.1	36	33
December.....	6	25.2	3	0.9	31	19

249.0	60.2
153 sold.	5 sold.

96	55.2
20 set.	5.10 set.

76	49.4
49.4	

125.4 eggs used in the family.

DE.—36 bushels corn.....	\$24.10
36 " oats.....	16.25
200 lbs. siftings.....	2.00
Meal and shorts.....	2.60
Scraps.....	1.50—\$46.45
4 hens died.....	1.90
21 chicks died.....	1.95
19 ducks ".....	96— 4.81

Total cost.....\$51.26

CE.—158 dozen eggs sold.....	\$35.37
77 hens and chickens.....	24.32
25 ducks.....	17.51—\$77.20
Food and loss.....	51.26

125½ doz. eggs used in family, at 20c.....	25.06
8 fowls used in family.....	3.15
17 ducks " ".....	10.33— 38.54

10 bbls. manure.....	\$64.48
Premium at the Fair.....	10.00

Profit.....\$75.48

Stock on hand, Jan. 1, 1862—32 fowls, 11 ducks; and now, Jan. 27, I have 18 chickens hatched on the 11th and 18th inst., which will commence laying in July, and then I dispose of the old fowls.

Salem, Jan. 27, 1862. JAS. BUFFINGTON.

THE WEATHER IN VERMONT.

We have just experienced the greatest snow and blow that has occurred in this vicinity, (Lyndon, Vt.,) for many years, so the "old folks" say. During one week, about two and a half feet of snow fell—terminating February 25, in a perfect bluster! Highways and railroads were completely blockaded—so much so that the passenger and freight trains upon the Passumpsic road were obliged to "lay out" nearly twenty-four hours within about four miles of Barton; and drifts were piled mountain high in every direction. We mark it the great snow and blow of 1862. How far did it extend? I think the snow upon the

ground the present time will average four feet deep—some say five. The winter of 1861–62 may very properly be recorded as a season of snows, blows and variable weather.

I. W. S.

FREAK OF A DWARF PEAR TREE.

One year ago last summer, a Duchess d'Angoulême gave out a bunch of blossoms at the usual season, and three pears set; I destroyed all but one, the tree being very small, supposing I had committed no outrage, nor wounded the feelings. But quite the last of June, after the limbs had grown three or four inches, on the end of a spur or limb, 2½ inches in length, all of which had grown that season, appeared a blossom; the fruit set and matured in the fall, about four weeks after the first, though not as large, but fair. The first measured 12 inches one way and 11 the other. Thus you have the freak of my pear tree.

S. W. EDSON.

Feeding Hills, March, 1862.

BUFFUM AND BLOODGOOD PEARS.

Can you inform me through the *Farmer* where the varieties of pears known as the Buffum and Bloodgood can be procured.

P. BRADFORD.

REMARKS.—Of Hon. Marshall P. Wilder, Boston.

For the New England Farmer.

START YOUR TOMATOES.

MR. EDITOR:—The tomato is now so universally relished that it is almost superfluous to urge its claims, but the past year gave such an inferior crop of all tree fruits and wild berries, that the importance of some substitute becomes more apparent, and taking into consideration the ease and certainty of its production, its abundant yield, and the fact that a relish for it can be acquired by almost every one, I know of nothing which can better supply a deficiency in the ordinary fruit crop than the tomato.

The only difficulty is in ripening them sufficiently early, but this may be obviated by any one with common facilities. The first aim should be to get early varieties, and the yellow plum is among the earliest, and to my taste, is the best flavored tomato I have ever tested, but the labor of peeling, when prepared in that manner, is an objection. The large, smooth red is nearly as early, and is a very good variety. The perfected, about which so much has been said, did not ripen last year in my grounds until two months after the yellow, and is no better in quality than other varieties.

The next important item is to get them started properly before the season for planting out, and in this there is often a great failure. I frequently see them planted very thickly, in very compact soil, and kept saturated with water, which treatment, of course, causes them to grow up very tall and "spindling," and when they are transplanted, what few roots they have are so matted together and so firmly fastened in the soil, that most of them are torn off, and the plants, made succulent and tender by shade and excess of moisture, if they ever start at all, are so checked as to be very little ahead of plants started in the open ground.

The best method I have ever tried, is to plant

the seeds in small flower pots, five or six inches in diameter at top. These have an inch or two of coarsely broken charcoal placed in the bottom, and they are then filled with some porous soil; that taken from an old hot-bed is good, or well decomposed muck and sand, with a little very fine manure, or better still, a mixture of one-half each of leaf mould and good sand, and a few seeds planted in each pot, and the pots placed in the windows close to the glass. When the plants are up strong, I thin them out with a pair of scissors as often as there is the least appearance of crowding, taking care to leave the best plants, until all but one are cut out; one near the centre of the pot being preferred. Water is supplied in sufficient quantity to prevent any withering, but with care not to keep the soil very wet. The time for planting is usually about the first of March, but if planted April first, they will do much better than out-door plants. A few of these, for very early fruit, are planted in a slight hot-bed, late in April, and when danger from frost is past the glass is removed. The remainder are planted in open ground as soon as it can safely be done. My best and most productive plants last year, were planted out in ground prepared for melons, by plowing into a good, strong loam a liberal dressing of sand and manure, and then preparing hills by mixing three shovelfuls of horse and hog manure with plenty of sand and loam—the hill when finished being raised a few inches. When I wish to remove the plant from the pot I place one hand over the surface, (with the plant, of course, between the fingers,) and invert it, rapping the pot slightly, if the plant does not drop out without, when the whole will be found filled with roots, and if carefully planted but little check will be given.

A little exposure to the out-door air during the middle of the day, however, for a few days previous to planting out, is beneficial. The first fruit which ripens should always be saved for seed, and if two or more varieties are cultivated they should be planted as far apart as convenient, in order to prevent mixing. If trained on the sunny side of a building, or fence, the fruit will be sweeter as well as earlier. An abundant supply of sand in the soil also produces a similar effect.

WILLIAM F. BASSETT.

Ashfield, Feb. 20, 1862.

AGRICULTURAL TRANSACTIONS.—We have the Transactions of the Hampshire, Franklin and Hampden Agricultural Society for the year 1861. It is now in the 44th year of its existence. In the account of the last Exhibition, the Secretary states "that in no sense have our agricultural interests suffered in consequence of the civil war now raging, the yield of crops being fully up to the average of past years." The Address was by T. G. HUNTINGTON, Esq., and an excellent one it is. He touched upon several points which cannot fail to arouse some wholesome thought.

Among the Reports, there is an extended one on Sheep, by Mr. J. E. Wight, and one on Stock in General, by George M. Atwater, George Taylor and T. P. Huntington. There are no others of special value.

LEGISLATIVE AGRICULTURAL SOCIETY.

REPORTED FOR THE FARMER BY D. W. LOTHROP.

The ninth meeting of the series was held on Monday evening last at the State House. The subject for discussion was *Fruit Culture*, and the Hon. MARSHALL P. WILDER being present, according to announcement, presided.

The chairman thanked the committee for the position they had assigned him, and regretted his inability to be present at the last meeting. He thought success in fruit culture depended, first, upon the selection of a few good hardy varieties; secondly, upon proper soil and location; and thirdly, upon the care and treatment of trees. The adaptation of soil and position he regarded as very important, as different soils were congenial to different fruits. He alluded to a convention of fruit-growers at Albany—at which he was present—who were desirous of selecting fruit trees adapted to each State; but soil and external influences were so varied they found it difficult, and were obliged to make divisions of some of the States. Why this difference existed was not readily explained. A few varieties had a very wide range. The Bartlett pear maintained its excellence everywhere; it was the great market pear in London, and even in Paris. The western slope of the Rocky Mountains was referred to as an important climate for fruit, superior to the eastern in most respects, as even the foreign grapes would flourish there.

Mr. W. also spoke of the thorough drainage of orchards as the foundation of successful fruit-growing. Even side hills were benefited by it, and drainage should be the rule, not the exception. Before planting an orchard, the ground should be thoroughly trenched, or worked over, and the manure well intermixed. The soil need not be deep—perhaps about 18 inches—as the cultivator should aim to give the roots a lateral rather than a more descending growth. With good care, trees seven or eight years old, will have roots ten to twelve feet long.

As to the manuring of trees, the speaker thought it should be done in the autumn—the manure being placed on the surface and forked in two or three inches deep in the spring. The deep sinking of manure is objectionable, as chemists tell us its chemical action is in a measure destroyed or entirely prevented. On or near the surface, the external elements act upon it, it becomes rotten and fine, and its soluble ingredients sink to the roots and are taken up.

The speaker also alluded to pruning—the object of which is to regulate the sap and curtail the branches. Different varieties of fruit trees require different pruning. The time for this was when the trees or the sap was dormant—in early spring, even now, is the best time.

Mr. W. spoke, too, of the vicissitudes of fruit culture. The last year was very bad. It was the sudden changes of temperature in our climate that worked the great mischief. He alluded to the severe frost on the night of October 1st, 1860, which stiffened our grapes and froze the buds of his Chinese Azaleas. Also, to that on the succeeding 8th of February, when the mercury sunk to twenty-six degrees below zero, preceded by a mild day when it was fifty-two above—a difference of seventy-eight degrees in twenty-four hours! Even oaks were injured; but the circumstance exhibited the hardness of many of our trees. And here, Mr. W. observed that he thought some of our pear trees were harder than the apple tree. His Vicar of Winkfield, Louise Bonne de Jersey, Belle Lucrative and Urbaniste trees had not failed to give him fruit, while his apple trees did not yield. The effect of cold winds in the spring he thought disastrous to fruit trees and spoke of losing thereby a quantity of quince stocks. As we can make our soil good, favorable exposure of some trees as to ripening their fruit was important, as by doing so, we may gain in effect a degree of latitude. The Easter Beurre needed a warm exposure. With us it does not exceed over eight ounces in weight, but in the climate of California it has reached the enormous weight of forty ounces! He saw wax models of pears in Washington, eight inches in height and seventeen and a half in circumference! If we had that climate we could do the same; hence the importance of studying position.

The chairman also alluded to dwarf trees, and regarded many pears as better on quince roots than on pear. He had received a letter from Mr. Rivers, of England, who had lately examined some which were forty years old, and yet in good health. Trees succeed best in the climate where they are raised. We have a large number of new varieties, and as they promise well, the day may come when we can have some adapted to every position. The past season trees have grown well, with hard and well-ripened wood, and we may safely expect the coming season a great quantity of fruit.

In conclusion, Mr. Wilder spoke of fruit culture in his day, of the vast extent and varied climate of our country, and felt, as he always had, the greatness of such blessings; and as the names of Van Mons and his associates in Europe are not forgotten, let us and our children revere the names of Lowell, Downing, and others who have gone before us.

Mr. SHELDON, of Wilmington, being called upon, spoke of pruning. He thought there were two seasons when it was best to prune—in the autumn and in the spring when the days and nights were of about equal length; but prune even now.

His best orchard had been pruned in March; he had experimented upon some of his trees by sawing off a limb each month, but thought the time mentioned the best. Trees two years from the bud, he regarded as the best for an orchard—better than those of three. To prevent mice from gnawing his young trees, he used sand around them, or trod down the snow. Of varieties of apples, he thought the Baldwin the best, and it sold well from the orchard; the market, too, was never clogged. The next best was the Gravenstein; he also praised the Green Sweeting; it was a great bearer, and the fruit good for stock. In this connection, he alluded to a fine horse he once owned, which he frequently let for parade grounds. He became troubled with glanders, and putting him to a doctor, the advice was at length to kill him. But he was placed in an orchard, and as the sweet apples fell he devoured them, and recovered, so that after being sold, he produced progeny worth \$200 each. His most profitable apple, Mr. S. thought, was the Red Astrachan, though they were getting plenty, and would become less profitable. He had sold some for \$6 a bushel at the Revere House. But the Baldwin was best for market, and as to the Northern Spy, it was out of place on our cold New England hills.

Dr. LORING, of Salem, being called up, said he was not versed in horticulture, but would make a few inquiries. Was it best to raise even the hardiest pears rather than apples?

Mr. WILDER replied that apples would succeed well on poor land, and some varieties were even better on such soil.

Dr. LORING resumed, and observed that apples were the farmers' general fruit. Custom frequently decides the crops of our country, and as to English grass, that had received the sanction of our farmers. Would it be safe to graft the suckers of old orchards, or would it be better to replant young trees?

Mr. WILDER replied that he would as soon engraft a child on his father's head as a scion into a sucker. Old stocks from the forest, which some had sought, were a like curse.

Dr. LORING was glad of this distinct opinion. He then alluded to Mr. Sheldon's idea of fruit-raising being a profitable branch of farming, which called up the latter gentleman.

Mr. SHELDON spoke of planting an orchard on a stony hill, covered previously with pitch pine, which did not grow well. He took out a large quantity of rock, so as to sensibly lower the field. He had another orchard on a plain, but it was not worth half as much as the one on the stony, rocky soil. His neighbors said it was useless to plant trees in Wilmington, but he had sold more apples and potatoes than any twelve men in the place. His townsmen did not think farming was profitable.

ble, but he did, and preferred to be a farmer in Wilmington than anywhere else. Boston market was good, and the Woburn very respectable.

Dr. LORING observed that the question of profit would decide the question of fruit raising. He had his doubts whether orchards were as good as crops. An apple tree was useless at fifty years old, it would bear only about thirty-five years, and then only in alternate years, while little else could occupy the ground of an orchard. He would not speak directly against trees, but he would have them on land that was not suitable for other purposes.

Mr. SHELDON again spoke, and said apple trees would bear at twelve years, and alluded to his own profits of fruit culture.

Mr. HOWARD, of the *Cultivator*, spoke of the adaptation of trees to soil and climate. Varieties fit for cultivation were few, compared with the whole number. Natives are the best. The Greening, Roxbury Russet and Baldwin were mentioned as standards of excellence. Other varieties in the West may be profitable, but will they answer here? The Tompkins County King was alluded to as beautiful there, but not tested here. Generally, the New York apples will not flourish in our regions—witness the Newtown Pippin and the Esopus Spitzenberg. Mr. H. saw the former in Europe, where they were selling at a sixpence apiece—the best apple they knew. The best fruit fairs in England he did not attend, but those in France he did; yet they did not come up to ours. Their pears were better, but the American and Canada apples maintain their superiority over the world. He would not advise every farmer, however, to make fruit growing a specialty. Our apples are so good, there can be no competition in Europe. He spoke of a single firm that had shipped 80,000 barrels. Pear trees, he thought, had suffered much from cold winters, and it was a caution to us to select the most hardy.

Mr. WILDER said the Tompkins County King indicated as well here as in New York. At a vote of the North-western Fruit Growers' convention, the choice apples stood as follows:—Baldwin, Rhode Island Greening, Roxbury Russet, Tompkins County King, and the Tolman Sweet. It is the fluctuations, rather than the cold, which injure our trees. The Tartarean cherry is hardy at home, but tender here from the revolutions of our seasons. Inquiry being made as to digging a hole for trees, Mr. W. said again that the soil should be trenched about eighteen inches deep, with the manure well incorporated, so as to encourage the lateral growth of roots. Holes for trees were pot-holes for water. He did not think much could be done with old trees, but by removing the grass and putting on ashes and lime, they might be improved.

Mr. SARGEANT inquired of Mr. Rogers's hybrid grapes, and the chairman replied that they were the first instances of the artificial crossing of the grape; but if the subject were continued at the next meeting, they might be again alluded to.

Other short speeches were made, when Mr. WETHERELL moved to lay the *same subject* over for discussion at the next meeting, which motion prevailed. It is understood that grapes, strawberries and the smaller fruits will then be particularly discussed.

For the New England Farmer.

A SPRING SONG.

BY JOHN CALVIN GITCHELL.

We count the hours that come and go
Between us and each hoped-for pleasure,
Impatient that they move so slow,
To make complete the dial's measure;

But dare not note the hours that pass
Between us and a looked-for sorrow;
And only cry, alas! alas!
Let it not come until to-morrow.

God gives us buds in the spring-time,
In summer, full-grown leaves and flowers;
And yet some deem it is a crime
To worship Flora in her bowers.

But on we move, and on we move,
And country bards will still keep singing—
"The months are here for holy love,
For leaves and blooms to life are springing!"

Boscawen, N. H., March, 1862.

For the New England Farmer.

PLAN OF A SHEEP BARN.

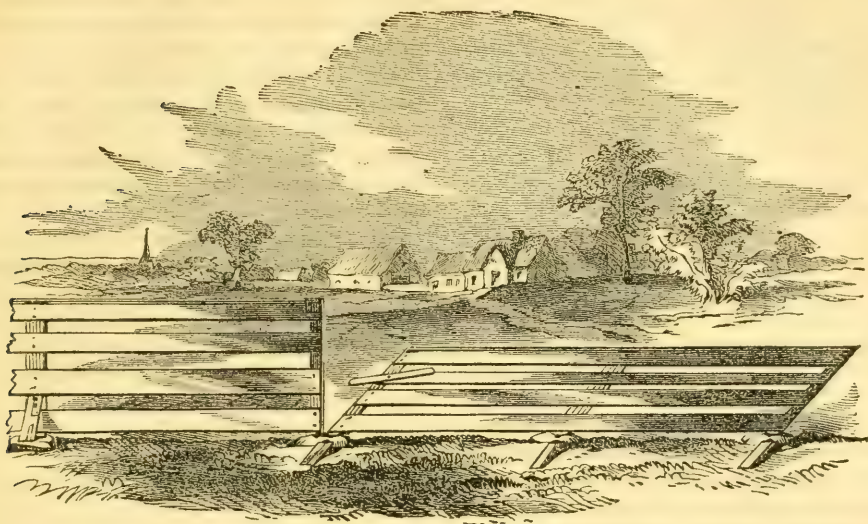
"Subscriber," of Rumney, N. H., wants a plan of a sheep barn of capacity to accommodate 200 or 300 sheep, standing on level ground.

I give you a plan, according to my idea, that may meet the approbation of some who may be about to build for the same purpose.

The barn should be at least 40 by 60 feet; a floor or driveway 12 feet wide, running through the centre from end to end, leaving 14 feet on each side for leantos. The floor or driveway to be elevated 2 feet, by framing in to the posts an extra tier of timbers for the floor to rest upon. There are two advantages gained by the elevation: first, the pitching off hay from the cart, and second, by giving a good chance for racks to feed in, off the side of the floor. The racks should run the entire length of the barn. Rack rounds should be set 4 inches apart from centre to centre. A crib should be made at the bottom of the rack, about 14 inches wide, with uprights 15 or 16 inches apart, going into the rack nave. If more racks are wanted, put in short ones across the leantos, which will, at the same time, divide the flock if you choose. There will be a good chance for a cellar under the floor, costing but little to dig it, the floor being elevated. When the barn is well underpinned, then fill up the leantos, to the bottom of the sills, with sand or loam, which will be preferable to a floor, making a good place for composting leaves, straw, &c., with the droppings of the sheep.

SUBSCRIBER.

Groton, N. H., 1862.



For the New England Farmer.

**SMITH'S IMPROVED FARM FENCE,
PATENTED OCT. 11, 1859.**

NUMBER TWO.

This fence is made much in the same manner as No. 1, except the fastenings of the posts and braces. It is built in sections of 16 or 18 feet each, so as to be let down flat to the ground, while it is held securely to the stone foundation; thus adapting it to all low lands subject to floating ice and drift wood, and also to places where snow-drifts are troublesome in the winter. When there is danger of the boards being trodden upon by cattle the sections are numbered, and can be easily detached from their foundation, and piled up, or removed to a place of safety. The stones upon which the fence rests are placed deeper in the ground than those for No. 1, so as to allow the sections of the fence, when turned down, to lie as nearly flat as possible, and thus prevent it from warping.

When it is necessary to let the fence down, (which should be in the direction the current runs,) a person passes along on the opposite side of the fence, and with a hammer unfastens all the braces from the posts on that side, and turns them down; which is easily and quickly done; then, on the other side, turns up the caps which confine the outside posts of each section, at the top; then unfastens and turns down the braces which support these posts, leaving the brace against the middle post for the last. This is then unfastened, the section let down, and a stake about 2 feet in length is driven diagonally into the ground between the upper panels of the fence to prevent this part of it from being lifted up by the water.

The deep snows and driving winds of the present winter have taught us severe lessons as to the great inconveniences of snow-drifts. From Maine to Maryland, and from the lakes to Tennessee, there is hardly a square mile of territory over

which a road passes, but where snow-drifts are more or less troublesome. The roads leading from our State capital to many of our largest towns, for weeks together, have been, in many places, absolutely impassable. An immense amount of labor and steam has been expended upon our common roads and railroads to keep them open. Travelling over many of our roads, in any way except on foot, at the present hour, is unsafe if not dangerous. A single step out of the track, and your horse flounders in the snow, and the only chance of getting him back into the path is to release him from the sleigh, and then, perhaps, after a few more plunges you find yourself and horse ready to repeat the experiment as soon as you meet another sleigh! In many places business over the road is suspended, or the roads are abandoned, and the travel goes round through the open field, and one is very apt "to wonder" whether dogs and sledges would not be an improvement.

Now what are the causes of these snow-drifts, and is there no remedy? The snow seldom drifts in the open fields, or in the cuts for our common roads or railroads. There is not a single doubt that nineteen-twentieths of them are caused by road fences; and if the publishers of the *Farmer* wish to know how deep the snow is in this region, I can answer correctly. It is good 2 feet in the open fields, and from 3 feet to 5 feet between the road fences. A well built dam does not more surely arrest the waters of a running stream than do these fences the drifting snows of winter. Remove the cause, and the snow will find and keep its level almost as well as water, except in low places, and even in those it will not be very troublesome.

Now for the fence. Two men can remove the sections of No. 2 fence, and put them back in the spring in less time than it will take to open a road the same distance, after a single driving snow storm. As lawyers sometimes say, "Here we

TAN BARK FOR SOILS.

As the questions which you were kind enough to answer in your February number of the monthly *Farmer* seem to have brought out some ideas different from your own, in regard to the best time and manner of sowing grass seed, will you please allow me room in your valuable paper to propose a few more, for your own and your correspondents' consideration?

On my farm I have three distinct kinds of soil; the first is a hard, deep upland soil; the second is a shallow, light and much worn pine plain, and the third a deep, heavy loam and clay, or commonly called run land. Now I have a large quantity of spent tan from hemlock bark, and as I believe there must be valuable fertilizing qualities in it, I wish to know the best way of applying the same, and which of the three soils will receive the quickest and most lasting benefit from a generous application?

I am but a young man, and am obliged in some respects to be guided by older and more experienced persons than myself; therefore, whatever thoughts these questions bring out will be of benefit to me, and I believe to others of your readers.

North Dunbarton, N. H., 1862.

P.

REMARKS.—We should think the tan bark, in an old, partially decomposed state, would operate favorably on any land, but with especial effect on the second and third sorts you mention. At an agricultural mass meeting which we attended in the town of Marlow, N. H., some years since, it was stated by one of the speakers that the best piece of land then in the town was originally a barren plain, once covered with pines, and that it had been brought into a state of great fertility, chiefly by the use of *hemlock tan bark*! The piece of land was distinctly specified, and reference was made to other persons in the meeting who confirmed the statement of the speaker.

LEGHORN FOWLS.

Although much has been said about Leghorn fowls, I am aware there are those who do not know what full-blooded Leghorn fowls are. A gentleman of this city came to me and wished to purchase some of the best Leghorn fowls he could find, and as I did not wish to dispose of any, I referred him to a piece I saw in a paper, where a man spoke highly of a large flock which he had, and advised him to send for some. He ordered six of the best he had, or none. He received six fowls, and wished me to see what I thought of them. He said one of my fowls had more comb than all of them. I said I thought they were half grown Leghorns, or half bantams. He assured me that some of them were shedding their feathers. He set the coop in his hen-house, where he had a fine Leghorn cock, who was so disgusted with his company, that he made war with the coop of fowls, and scratched himself so that he bled to death. He returned them to the owner, and concluded he did not profit much from my advice.

I have kept the pure Leghorn fowls about two years, and think all who have tried them will agree that they are the most profitable and the most beautiful fowl in this country. They are

small, (weighing about $8\frac{1}{2}$ lbs. per pair,) but their eggs are as large as hens will average. I have never had one offer to sit. They are all colors, and have very large combs. The cocks measure from seven to eight inches from the top of the comb to the extremity of the wattles, and the hens' combs hang over so as to cover the eye.

H. T. GATES.

New Worcester, March, 1862.

THE WAY TO CURE THE HEAVES IN HORSES.

The above-mentioned disease has been considered incurable. About two years since, I owned a mare which had the heaves very badly. The disease was brought on by feeding her dusty hay, raked with a wire tooth horse-rake; which, by the way, should never be used to rake the hay with that we intend to feed to horses. Dusty hay is very injurious to their lungs, and has been the principal cause of the heaves in many cases.

At the time I was speaking about, I saw a notice in the *Farmer* that smart-weed would cure the heaves; I procured some, and gave her a strong decoction of it several times; and to my astonishment, she was completely cured.

I gave her one quart a day of the decoction, stirred up in wheat bran, with a little salt, and in three weeks the cure was perfect.

I do not intend to say that it will cure the heaves in all cases, but if it is given in the early stages of the disease, I think it will cure ninety cases out of a hundred.

I would like to have your correspondent, Mr. Thomas Cruickshank, inform me through the columns of the *Farmer* the mode of manufacturing sugar from beets.

OLIVER P. MEAD.

Middlebury, Vt.

REMARKS.—We give another letter to-day, from Mr. C., on the subject of sugar-making.

FEEDING BONE DUST TO COWS.—Your correspondent "Country," says his cow's toes grow too long. I have had sheep's toes do the same while stabled. Some time ago, a young farmer living some 20 miles from me, said that he had, at different times, in his barn, cows whose claws would grow too long, and occasionally one claw would grow around the end of the other claw, and that it was cured by feeding bone dust. He had fed as much as one tablespoonful each day to a cow in cut feed, with marked effect. He acknowledged it was full, strong feed. I generally feed one tablespoonful twice in a week to each cow, but do not know its effect. My reason for doing it, is, that my neighborhood has been pastured these 200 years, and little or no manure put on the ground, hence the soil is wanting in bone-making materials.—*Country Gentleman.*

TO MAKE AN EVERGREEN GROW COMPACT.—If you have an Evergreen, or Norway Spruce, Balsam Fir, American Spruce, or any of the pines, and desire to make it grow more compact, just pinch out the bud from every leading branch, all around and over it. Repeat this process again next year, at this time, and your evergreen will continue thereafter to grow thickly.—*Indiana Farmer.*

LEGISLATIVE AGRICULTURAL SOCIETY.

REPORTED FOR THE FARMER BY D. W. LOTHROP.

The tenth meeting of the series was held on Monday evening last at the State House, when the continued subject of *Fruit Culture* was discussed. Mr. C. M. HOVEY, editor of the *Magazine of Horticulture*, being present, was invited to preside.

He accepted the position of chairman with pleasure, and proposed to speak of the strawberry. Small fruits had been sadly neglected in our gardens; but the strawberry was of easy cultivation, took up but little room, was healthy and agreeable to the system—no one being able to eat too many—and was prominent among the small fruits much needed in the summer. He gave a brief history of the strawberry in this country and in Europe. There were but few kinds generally cultivated there, till the introduction of the American strawberry about a hundred years ago. When the London Horticultural Society was organized, a new interest in this fruit was awakened. Messrs. Keen, Wilmot and Knight raised many new varieties, and some of them very good. In 1824, the London Society took steps to test the kinds in cultivation, and out of two hundred varieties, only fifty-four were regarded as distinct. The American strawberries are different from the English. The *Wood*, heretofore a distinguished variety, had not been changed or mixed. About the year 1834, another impulse was given to strawberry culture in England, and while some of the varieties did well there, they would not succeed here.

In this country, we have no definite records upon this subject. The *Virginia* and the *Wood* seemed to have been the first and the only varieties cultivated in this country for many years. Mr. William Prince, of New York, however, imported many new varieties from Europe, and *Keen's Seedling* and *Wilmot's Superb* were introduced here. Mr. Hovey observed that he procured many sorts from Mr. Prince, but was disappointed in them, as they were not fitted for our climate. In 1833, Mr. H. commenced to raise strawberries from the seed, and produced the well-known variety called *Hovey's Seedling*, which soon began to supplant the old *Virginia* and *Wood*. It was the first seedling in the country, and attracted great attention—many amateur cultivators commencing to raise from seed, as it was an exciting and novel matter.

Mr. H. spoke of the different species of the strawberry; of its classification by Linnaeus with respect to its self-fructifying power, having perfect flowers, containing both stamens and pistils; of kinds that would mix and those that would not. The *Chili* strawberry was large but insipid; yet ours are acid. By a mixture of these, many good varieties had been produced. Strawberries of

different habits, as to running, &c., require different treatment.

The chairman also spoke of culture, which was simple. It should be good to produce large fruit, but required care rather than labor. Some had neglected the new kinds and had met with disappointment. The large varieties need more room than the old, small varieties—room in proportion to their size. He spoke of Mr. Knight's method of planting vines in the spring and letting them run in the summer to produce vines for the next season; they should then be dug up and a new bed formed. Plant in rows four feet apart. The celebrated Cobbett had taught a doctrine similar to this. As to manure, stimulating manure was hurtful. Manure should be applied when the bed is set out, and then again when reset. The annual system, now practiced by our Belmont cultivators—that is, of raising only one crop before digging up the bed—he thought the least laborious and productive of the best results. Plant in rows in the spring four feet apart, and let them grow the first summer. In October hoe out an alley and cover the vines. In fifteen months, the crop is picked. Then turn the bed over, and so arrange the cultivation that while some beds, or parts of beds, are forming vines, the others will be bearing—thus yielding fruit annually. Plants of a bushy habit should be planted in single rows; they are good for the amateur, but should not be suffered to grow thick. A gentleman in Pittsburg, Pa., cultivates these varieties with a horse cultivator. Guano was a dangerous manure in some hands; but a little will do for strawberries. Watering the plants in England was common, as moist as their climate is; yet size was produced at the expense of flavor. Our vines in some seasons need watering, but let it be done in a thorough manner, not an occasional dribbling. Good, well-rotted manure is best, laid on the soil before the runners are planted, or dug in when the old bed is turned under. Mr. H. recommended straw under the vines as a mulching; but tan was objectionable, as it harbored injurious insects.

As to profits, the chairman observed, that though large stories were often published, we should not make the cultivator think he could get rapidly rich. He spoke, too, of the cost of culture; of the carelessly picked strawberries in the Cincinnati market, with their hulls upon them; of the number of bushels to the acre which it had been stated were raised; of 4000 quarts per acre by some of the Belmont cultivators, and even greater, seven-eighths being Hovey's Seedling. Gathering in Philadelphia had been stated to cost one and a half cents per box; but in Belmont five cents is paid to men who understand the business. How many boxes could be picked in a day depended upon the size and varieties. The im-

portance of raising new kinds was alluded to; though some cultivators cling to the old sorts; yet we should be careful in introducing new varieties. The late kinds were the most profitable, as the New York strawberries were in our market in early summer. *Wilson's Albany* was much cultivated, but though large and plentiful, it was decidedly sour. *La Constante* was a large and very superior variety. Only a few and the best should be cultivated.

Hon. MARSHALL P. WILDER, being called upon, remarked that he would gladly confirm what the chairman had said. Strawberries should be planted in the spring; the plants should be strong, the ground well prepared, and receive careful subsequent treatment. The second year they will bear great crops; then break up the bed and replant. This is what is called the annual or Belmont system. Mr. W. also alluded to Hovey's Seedling. Its production introduced a new era in strawberry culture. It yielded the largest crop of any sent to our market, and must be regarded as a standard variety. All honor to Mr. Hovey. The importance of the discovery of the sexes of plants was referred to, and Mr. Knights' efforts at hybridization in the production of new varieties of fruit was extolled. This is to be the true source of new fruits, but let us still sow seed from natural hybridization. Pistillate flowers must have staminate flowers for their impregnation, though generally both are united in one.

The speaker, in answering an inquiry regarding Mr. Rodgers' hybrid grapes, said these are new varieties raised by artificial crossing of the *Black Hamburg* and the *Sweetwater* upon the wild grape, (*Vitis labrusca*), of our woods. About thirty varieties were produced, and while some are of great promise, it is too early to speak distinctly of them. This country, Mr. W. thought, was destined to become a great grape-producing and wine-producing part of the globe. As our grapes do not do well in California, nor theirs here, seedlings become more important. The *Concord* is a hardy grape, better farther south, but good enough here. The *Delaware* is a small grape, not very pleasing in appearance, but of a higher character than the *Concord*. The *Hartford Prolific* is doing well, and did not seem to fall from the vines the last year. We need hardy grapes, and we may yet raise some better than the *Concord*. A hardy and early grape is a great desideratum.

But, Mr. Wilder said, he would turn from this subject to another, different in its nature, but not less pleasing to dwell upon. There is a gentleman among us, who has attended these meetings a long time, and participated in these discussions, himself a thorough, practical farmer, and who said, the other evening, "he would give more for

one day's experience than a whole year's guessing," of whom he wished to speak. He referred to Mr. A. G. SHELDON, of Wilmington. He proposes to publish a small book, embracing his autobiography, and all the various subjects of practical farming in his experience. Mr. W. warmly commended the project, and said the work could be subscribed for after the meeting, at 50 to 75 cents in cloth, or \$1.00 or \$1.25 in calf.

Mr. WETHERELL endorsed Mr. Wilder, and hoped the work would be encouraged.

Mr. HOVEY also warmly favored it. We should have books that are books—not shadows. A book at hand of experiences is important.

Inquiry being made as to whether the *High Bush Blackberry* was injurious to the soil or not, by any poisonous exudations from its roots, the chairman replied that he did not know of any such effect. It was hardy, and occupied the ground rapidly; but the suckers should be cut up, and the best canes tied to a stake. It was an important fruit, and he had rather do without the raspberry than the blackberry, as it was late. He spoke of the *Dorchester*, and thought, also, that the *Lawton* was a valuable acquisition. The former, he believed, would pay as a market fruit.

Inquiry being made as to whether the *Huckleberry* had been cultivated, Mr. WILDER observed that he had received seed of a large kind, growing in Washington Territory, five or six feet in height, which he thought would be valuable in our gardens.

Inquiry being also made as to the *Cranberry*, the chairman spoke of Sir Joseph Banks raising it upon high land. Mr. H. thought it worthy of the cultivator's attention; and as he had seen some very large ones from Pawtucket, R. I., he thought of procuring the seed, and trying his hand at seedling cranberries.

Mr. BECKWITH said he had seen some very large cranberries growing in a gentleman's garden on dry soil, the vines being taken from a pasture of a gravelly nature, where they had been growing for years.

Mr. WILDER spoke of the *Dorchester* and *Lawton Blackberries*. They are both hardy, but the latter is not eatable till very ripe, yet is a little larger than the former. The *Dorchester* was found in the lower part of his town some years ago, and he likes it best.

Mr. HOVEY said the *Dorchester* would give the best satisfaction, but if he could get the *Lawton* fully ripe, he preferred it.

Mr. HOWARD, of the *Cultivator*, said of the *Cranberry*, that we had two species, the meadow and the mountain. He had seen the latter on Blue Hill and in Sharon. It was common in Massachusetts and in Canada. But he intimated that they must have moisture, whether high or low.

Mr. SHELDON said that from some facts which he had observed, he thought sand good for the cranberry, but they should be kept moist and occasionally flowed.

Mr. Beckwith, Mr. Wilder and the chairman made a few more remarks upon this point, when the time having passed for closing the meeting, the subject for the next discussion was announced to be, *Farm Implements*.

For the New England Farmer.

NOTES FROM THE MONOMACK.

BY SAGGAHEW.

GRAPES.—Last spring I set out nearly one hundred grape vines, of various kinds. They were set upon a piece of land newly trenched; the soil was mostly a medium sandy loam, with a subsoil of sand and gravel. Through one part of the piece there is a strip, or vein, where the soil was quite thin, and the subsoil is a dry, coarse gravel. This was trenched like the rest, about eighteen inches deep, and, like the rest, was quite moderately manured with green cow manure. As will be remembered, the last season was an unusually trying one for newly transplanted trees and vines, and as my land was of the kind generally considered the most susceptible to droughts, and was not in even average condition as to manure, and, moreover, had just been trenched, I did not expect much growth of vine—at least, for one or two years,—through the gravelly portion above mentioned. Judge of my surprise, then, on finding that the vines set in that part of the garden made the most vigorous growth of any I had. I speak within bounds, when I say that a Hartford Prolific, a Concord, and a Diana, which were set in this thin, poor and gravelly soil, made double the growth of vines of the same age, set out at the same time, and taken from the same lots, but which were set in soil at least twice the depth, entirely free from gravel, and resting upon a subsoil of clear sand.

As a single year is insufficient to justify too strong conclusions as to which will do the best in the long run, I make a note of the above for the encouragement of those who may wish to set out a few vines, but fear that their soil may be too poor and gravelly for vines to succeed. To such persons I would say *trench* your ground thoroughly; put on much or little manure,—as you may chance to have it—and set out your vines. Afterwards, you can top-dress at your leisure. If you cannot afford to trench all the ground now, trench at least three or four feet around each vine before you set them out. Next year you can work over a few feet more, and in this way you will hardly feel the expense. Many persons neglect to do *any* thing, because they are not prepared now to do *everything*. This is not the true policy. Rather do a little at a time, and *keep doing*.

BUCKWHEAT CAKES.—If any one of the readers of the *Farmer* are fond of buckwheat griddle cakes, and like them all the better when light and crispy, let them use about one-fourth part of oatmeal in making them, serve them hot, from a *uncovered* dish, and in the winter on warm plates. My word for it, they will decide that these hints are good ones.

The oatmeal makes the cakes lighter, healthier, and improves their flavor; and the uncovered dish prevents them from becoming sodden by steaming. The best of all griddles to cook them upon are those made of soapstone. They require less care in cooking and not more than half as much lard as the common iron griddles. My family have breakfasted on buckwheat and oatmeal cakes for the past eighteen months, without regard to the season; and, although personally a chronic dyspeptic, I find them easy of digestion, and every way satisfactory. My family of five persons consume less than ten pounds of meal per week, at an average cost of less than three cents per pound, or less than one cent per breakfast for each person. When served as above directed, with good butter and syrup added, I doubt if a cheaper or better breakfast can be placed on a workingman's table.

GUANO.

"How much *guano* is necessary for an acre of corn?" This inquiry is often made. No definite quantity can be given in reply, because the circumstances under which it is used, will always be variable. As a general thing, too much is expected of guano, or any of the other so-called, specific fertilizers. Used sparingly, as they are usually employed, their principal office is to give immediate nourishment to young plants, and enable them to throw off vigorous roots in search of food farther from home, and to push them along rapidly in the early stages of their growth.

In order to accomplish these purposes, the opinion seems to be common, that 300 pounds of guano, or other specific fertilizer, is enough. We, however, think this quantity too small—that it is more profitable to add a larger amount per acre, and go over less land,—unless the dressing from the compost-heap is unusually large. Whatever the amount used, we think it should be mixed with good muck or loam—to which a little plaster may be added with great propriety—and a quart applied in the hill. This quantity will be sufficient to give the plants a good start, and maintain their growth and development until the roots shall have had time to penetrate to the manure which has been plowed in, or to take hold of the food naturally extant in the soil. The application of Peruvian guano alone in the hill is not advisable, as the ammonia in which it abounds exists in a too concentrated state to allow of its coming into immediate contact with the seed while in a state of germination, or even with the tender roots of vegetation. By incorporating it with mould, muck, or plaster, the guano will be less likely to cause the mischief which is sometimes experienced by the escape of its ammonia. We have known Peruvian guano to be mixed with old, finely-pulverized muck, early in March, in the proportion of *one* part of guano to *five* parts of muck. This laid in a mass from that time to the tenth of May, being

overhauled and thoroughly mixed two or three times during that period. It was then applied, about half a pint to each hill, and the corn dropt upon it, and in a field of ten acres there were not 500 spears of corn made their appearance. Even as we have recommended its application above, it would always be safer to mix the muck and guano with the soil, before dropping the corn upon it.

The American guano, having less ammonia, may be used by planting seeds directly upon it, but in this case we cannot doubt but it would be better to mix it with the soil into which the seed is planted. This guano, however, abounds in phosphates, and continues to carry the crop on until it is perfected.

Guano, purchased at fair prices, and judiciously applied, is an economical and efficient fertilizer. It is usually beneficial upon every description of soil and crops.

TO CORRESPONDENTS.

As usual, at this season of the year, we have on hand many communications that we cannot find room for at once. We shall publish first those that are adapted to the season, and then continue with others. These articles, we suppose, are the result of winter studies, and as the spring opens we shall have less of them. We hope our friends will continue to write, as the value of the *Farmer* must depend in a considerable degree upon their communications. Among the articles recently received and not published, are,—Upon Rivalry in Farming; The Right Thing in the Right Place at the Right Time; Barns; Why are so Few Young Men Fond of Farming? Patent Office Report; Mental Culture; Decline of the Hen Fever; Rotation in Forests; The Turnip Crop; About Bees; Fences; Why is not Farming Profitable? How Shall our Sons be best Educated? The Roadsides of the Farm; Agriculture in our Common Schools; Southern Illinois; Hints on Buying Farms; Does Farming Pay? Dissemination of Foul Seeds;—Painting and Shelter for Buildings; Agriculture in our Colleges; Plowing Orchards; Farm Buildings; Birds; On Deodorizing Materials; Ringing Plants; Sheep Barns; Meadow Muck; Wood's Mowing Machine; Clay as a Fertilizer; Culture and Uses of Kohl Rabi; New Method of Planting Potatoes; Quality and Quantity of Seed; Wheat Bran as a Fertilizer; Concentrated Manures; Sawdust as an Absorbent; How to Measure Hay; To the Young Men; Raising Calves; Culture of Leading Crops; St. Johns Wort; A Word about Colts; and The Characteristics of the Chester Co. Breed of White Swine. In addition to these there are letters of inquiries, all of which will be carefully attended to and find a place in good time. Correspondents will please accept our thanks for

these favors. Spread out upon our fair pages, they cannot fail of having a decided influence to advance our noble Art and elevate the homes of our people.

LADIES' DEPARTMENT.

DOMESTIC MORALS.

Who shall measure the evil brought into a school or university by one black sheep? The contamination is gradual, but certain, and many characters of the weaker sort, will, by bad association, receive that bias towards evil which was all that was necessary for their ruin. It is so, as we all have opportunities of seeing, among domestic servants. Their power of injuring each other is immense. Take the case of a small establishment, consisting, we will say, of a couple of servant maids, who have been brought up from the country. They are uninitiated in the slang of the London members of their tribe, and are contented and happy. They can exist without followers. They can do all the work of the house with ease and cheerfulness. They will take what it may be convenient to give them for dinner and supper, rather astonished, in fact, at fare so much superior to what they have been accustomed to in their own poverty-sticken homes. In short, they are good and contented servants, and their mistress congratulates herself with reason when she hears her friends complaining of domestic troubles. But how long does this last? On some special occasion of a grand cleaning, or some equally miserable disturbance, "help" is sent for, and the charwoman of discord is flung into the happy family. This worthy lady is kind enough to enlighten the two injured innocents to whose rescue she has come, as to their "rights." For these she exhorts them to stand up, as other servants do. What, will they "put up" with cold meat? are they satisfied to be deprived of the visits of their male relatives and other friends "from the country," whom they might regale so pleasantly and cheaply with their patron's food? Well, they are poor-spirited things if they allow themselves to be put upon like that!—*Dickens's All the Year Round.*

TO REMOVE STAINS.—Alcohol will wash out stains of oil, wax, resin and pitchy substances; so will spirits of turpentine, and generally without injury to colors. The turpentine may afterward be removed with alcohol, as it is liable to leave a slight stain. Common burning fluid, which is a mixture of alcohol and turpentine (or camphene,) is an excellent solvent of oil, wax, tar, resin, etc., and it soon dries off after use.

THE Paris women are excited about an electric head-dress invented for the Empress Eugenie. It is a crown formed of globules of glass lighted by electric light, and set with diamonds, rubies and emeralds. It emits such an effulgence as to light up of itself a dark room, and if ever put into general use, will supersede the necessity of gas light or wax candles. Every lady will be her own chandelier.

SUBSTITUTES FOR COFFEE.

The high price of tea and coffee has caused many to adopt substitutes for a morning beverage. Go where you will, you hear the subject discussed, and stepping into houses, you are regaled with the odor of burning peas, rye, barley, or whatever is designed for a substitute. That some of these articles will make a very palatable and wholesome beverage we think no one will deny. We give below some of the recipes that are floating around, and have been commended:

Rye Coffee.—Take a peck of rye and cover it with water, let it steep or boil until the grain swells or commences to burst, then drain or dry it. Roast to a deep brown color, and prepare as other coffee, allowing twice the time of boiling. Served with boiled milk.

Another.—Take some rye; 1st, scald it; 2d, dry it; 3d, brown it, and then mix it with one-third coffee and two-thirds rye, and then you will have as good a cup of coffee as you ever drank.

Sweet Potato Coffee.—Another writer, in one of our exchanges, gives the following recipe for the preparation of a substitute for coffee. We give it for what it is worth, never having seen it tried:

"Take sweet potatoes, cut them fine enough to dry conveniently, and when dried, grind in a coffee mill; dry them by the fire or stove at this season of the year, or by the sun when that will do it; grind and use, mixed with coffee in such proportions as you like. Some of my neighbors omit half of the coffee; some more."

Barley Coffee.—Take common barley, or the skinless if it can be obtained, roast as you would coffee, and mix in such proportion as suits your taste. It is very good.

Pea Coffee.—It is probably known to many that a very large per cent. of the ground coffee sold at the stores is common field peas roasted and ground with the coffee. There are hundreds of thousands of bushels of peas annually used for that purpose. Those who are in the habit of purchasing ground coffee can do better to buy their own peas, burn and grind them, and mix to suit themselves.

Carrot Coffee is recommended by an exchange. Cut up, dry and grind, and mix with coffee in quantities to suit the taste.

THE WOMEN OF A NATION.—I do not hesitate to say that the women give to every nation a moral temperament, which shows itself in its politics. A hundred times I have seen weak men show real public virtue, because they had by their sides women who supported them, not by advice as to particulars, but by fortifying their feelings of duty, and by directing their ambition. More frequently, I must confess, I have observed the domestic influence gradually transforming a man, naturally generous, noble and unselfish, into a cowardly, common-place, place-hunting self-seeker, thinking of public business only as a means of making himself comfortable—and this simply by contact with a well-conducted woman, a faithful wife, an excellent mother, but from whose mind the grand notion of public duty was entirely absorbed.—*Tocqueville.*

THE CATTLE MARKETS FOR MARCH.

The following is a summary of the reports for the four weeks ending March 20, 1862:

NUMBER AT MARKET.

	Cattle.	Sheep.	Shotes.	Live Fat Hogs.
February 27.....	778	2850	475	Few.
March 6.....	1036	4030	500	—
March 13.....	1359	1925	700	—
March 20.....	1217	1158	1040	150
Total.....	4590	9963	2715	150

PRICES.

	Feb. 27.	Mar. 6.	Mar. 13.	Mar. 20.
Beef cattle, $\frac{1}{2}$ lb.....	5 @ $\frac{6}{8}$ c	5 @ 7	5 @ $\frac{6}{8}$	5 @ $\frac{6}{8}$
Sheep, live weight.....	4 $\frac{1}{2}$ @ $\frac{5}{8}$	4 $\frac{1}{2}$ @ $\frac{5}{8}$	4 $\frac{1}{2}$ @ $\frac{5}{8}$	4 $\frac{1}{2}$ @ $\frac{5}{8}$
Swine, stores, wholesale.....	4 @ 5	4 $\frac{1}{2}$ @ $\frac{5}{8}$	3 $\frac{1}{2}$ @ $\frac{5}{8}$	3 $\frac{1}{2}$ @ $\frac{5}{8}$
" " retail.....	5 @ 6	4 $\frac{1}{2}$ @ 6	4 $\frac{1}{2}$ @ $\frac{6}{8}$	4 $\frac{1}{2}$ @ 6
Live fat hogs.....	4 $\frac{1}{2}$ @ 5			4 $\frac{1}{2}$

REMARKS.—Most of the cattle at market during the month were offered for sale as beef. Of the 4590 cattle reported above as the total for the four weeks, 2480, or more than one-half, were from the West. During the first half of the month the market showed an upward tendency, while for the last half it has been downward. This change was more marked in mutton than in beef, produced partly at least by the large arrivals of heavy sheep from the West, at the market of March 6th. Milch cows sold readily until the last week, March 20, when the market was quite dull.

CHICKENS VS. CHINCH BUGS AND PLUM WEEVILS.—We see it reported in the *Southern Planter*, that a hen and chickens placed in a coop in the corner of a wheat field, where the chinch bug had commenced its ravages, proved to be an effectual check upon the insects thereabouts, though they did considerable injury out of the range of the chickens.

The chinch bug is only one of the destructive insects which chickens are ever ready to pick up. In our yard stands a black-heart cherry tree, the fruit of which was quite wormy last year,—as is often the case with this variety. This spring we placed a chicken coop with its occupants near the tree, and secured a full crop of fruit, showing no appearance of worms. The insects, as they emerged from the ground in winged form, were so effectually picked up that they failed to deposit their eggs in the fruit. Of course there will be a short crop of worms next season.

NEW SEEDLING POTATOES.—In another column, Mr. CHARLES W. GLEASON, of Holden, in this State, advertises several varieties of new seedling potatoes, some of which we have seen, but not tasted. They are very handsome, and especially so is the *Garnet Chili*. It is of medium size, flattish, and the eyes are nearly on a level with the general surface of the potato. This is always a recommendation, as it is difficult to prepare a potato for the pot where its eyes are deeply set. Mr. Gleason has given much attention to the matter of introducing new varieties of good potatoes, and among them we shall undoubtedly find some that will be a valuable addition to our present list.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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NOURSE, EATON & TOLMAN, PROPRIETORS.
OFFICE....100 WASHINGTON STREET.

SIMON BROWN EDITOR.
HENRY F. FRENCH, ASSOCIATE EDITOR.

THOUGHTS ABOUT THE MONTH OF MAY.



MAY, among the old heathen Romans, was sacred to their god Apollo, who, according to their belief, presided over music, poetry, and the fine arts generally; and it is said that with them almost every day in the month was a festival. The custom which has descended to our own times, of observing the first day of the month, or May-day, with festive and floral rites, or at least by wandering over hills and dales in search of flowers,

is supposed to have been derived from an equally ancient Roman festival in honor of Flora, another of their gods, who had the especial charge of flowers and gardens. This holiday season lasted four days, from the 28th of April to the first of May.

In the warmer climates of Greece and Rome, the nurseries of our poetry and literature as well as of our arts and sciences, May is probably entitled to all the praises which have been lavished upon it by poets, and by their imitators in our own country, however inapplicable much of their poetical descriptions are to the season of May day with us.

In those countries, at the commencement of this month, we are told that the temperature of the air, the pure-blue of the sky, the soft green of the leaves, the thousand delicate tints of the flowers scattered so profusely over hill and valley, with the perfume which they exhale, and the music

poured from every grove—all unite to fill every sense with enjoyment. In such latitudes, the "ethereal mildness" and "balmy sweets" which breathe in song may be a literal transcript of the impressions of a May day on their inhabitants.

But with us, the first of May is too early for the out-door amusement of a holiday, especially by females, and those of sedentary habits. The earth is still too damp, the air too chill for health or comfort, and, besides, the charms of nature are not developed. Though scarcely a flower of the humblest rank can be found during a day's ramble, the youth of our land seem determined to perpetuate the observance of a festival which belongs to a more southern clime. Occasionally, indeed, the first of May is sufficiently warm, dry and comfortable for out-door exercise and amusement, but often the weather is quite unfavorable. Storms of rain and sleet, sometimes of snow even, are common, especially in the more elevated portions of New England, during the first week in May. So that, in our climate, the young people who decide on a May-day ramble, must be uncertain up to the very time of sallying forth at "peep of day," whether to dress themselves for the heat of summer, or for the chill of Winter,—for a soft southern wind, or for a piercing northeaster. And how often has a sore throat or a hoarse cough the next day reminded a fond mother that she was wrong in permitting her daughter to "go Maying" so thinly clad and in so cold a wind.

We fear that the life of many a youth is yearly sacrificed to the celebration of this holiday in New England. In England, where the season of spring is several degrees warmer than with us, the observance of May-day seems to be falling into disuse, although it was in old times one of the favorite holidays of the people. Milton, Shakspeare, and most of the old poets, have spoken of its festivities. Old Chaucer says that on May morning,

"Forth goeth all the Court, both moste and leste,
To fetch the floures, and braunch and blome."

Probably, the change consequent on the adoption of the New Style, by which the month commences about a dozen days earlier than it did in the times of those "good, old English gentlemen," is one reason why its observance is becoming unpopular. In her "Calendar of the Seasons," Mary Howitt says, "May-day, though still observed as a rural festival, has often little pleasure to bestow, except that arising from the name." In another later English publication, a writer, referring to the section of country in which he resides, says: "The May-day ceremonial has died out among us." These festivities he regards as belonging rather to the relationship of the feudal baron and his tenants, than to our own times, and rejoices that the benevolence of the English land-holders which once encouraged the observance of May-day, is as active now as ever, though directed to other and more worthy ones. "The school festival or pic-nic, the plowing-match and the horticultural show," says he, "have driven out May-poles and Christmas misrule."

If this festival is to be perpetuated in New England, its observance ought to be transferred to the latter part of the month, when the earth is covered with a garb of richest green, and when our orchards present

"One boundless blush, one white empurpled shower
Of mingled blossoms,"

and when one feels, as he walks in field or forest, like ejaculating with Wordsworth,

"And 'tis my faith that every flower
Enjoys the air it breathes."

But then this period is in the midst of the planting season, and the farmers of New England are so busy that we dare not recommend a change that would appropriate one of these busy days to a public celebration. May-day must, therefore, be postponed to the fourth of July.

For the New England Farmer.

SQUASHES VERSUS PUMPKINS.

MESSRS. EDITORS:—Crude notions exist regarding the above vegetables, which are constantly reiterated in many of our agricultural papers. They are classed indiscriminately as belonging to the same genus of plants, when, in fact, they are perfectly distinct. I am induced at this time to forward you a few words on this subject, from meeting in the *Working Farmer* of the last month, an article on the Autumnal Marrow, (known in New York) as the "Boston Marrow," as a true squash. Now this vegetable, together with the Valparaiso, Hubbard, Folk, Acorn and Custard, are as truly pumpkins, as the Connecticut field and Hard Shell pumpkins, and will all hybridize or mix, while the Winter Crook-neck, (which I take to be the true type of squashes,) will not hybridize with the pumpkin. If it was inclined to this, it would have lost its normal form and disappeared long since. Nature, as well as observation, teaches us regarding species, but

many confound the term species with varieties, hence some suppose that our Canada goose can be crossed, year after year, with our domestic goose, but this cannot be done after the first crossing, any more than the Jack and horse, which stops at the mule. In the paper alluded to as above, the writer cautions cultivators to be careful to sow melons, cucumbers, &c., away from pumpkins and squashes, as "they will hybridize." I have never as yet known the crook-neck to hybridize with the pumpkin, melons, cucumbers, &c., although planted side by side.

Yours truly,
J. M. IVES.
Salem, March, 1862.

For the New England Farmer.

HOW SEEDS GERMINATE.

A seed, when ripe, possesses a large share of carbon. This is necessary to its preservation, but is an impediment to its development as a new plant.

To rid itself of this principle it must convert the carbon into carbonic acid; for this purpose, oxygen is necessary, which it cannot readily obtain from the atmosphere in its dry state, but by burying it in the soil it takes the requisite supply of oxygen from the water, which it absorbs, fixing hydrogen (the other element of water) in its tissue, and thus it is enabled to form carbonic acid, which it throws off by its respiratory organs until the proportion of carbon is lowered to the amount best suited to the growth of the plant. The water also causes an expansion of the parts, many soluble parts become fluid, and thus sap is formed and a circulation is established, which keeps up a communication between the remote parts of the plant.

Heat aids in causing the vital principle to act, expands the air in the microscopic cavities of the seed, and produces a distention of all the organic parts, which thus have their irritability excited, never again to be destroyed except with death.

Germination being established, the parts enlarge, and new parts are formed from a mucilaginous saccharine secretion which the germinating seed has the power of forming.

From this the root, or radicle, is formed, and goes downward in search of food, the stem or plumule rears itself in the air and unfolds the seed leaves or cotyledons, which, when exposed to the light, decompose carbonic acid, fix the carbon, become green, and form the matter by which all the pre-existing parts are solidified.

And thus a plant is born into the world.

E. W. B.

VERMONT STATE AGRICULTURAL SOCIETY.—The officers of this Society for the year 1862 are:

President—H. HENRY BAXTER, Rutland; Vice Presidents—Edwin Hammond, Middlebury, J. W. Colburn, Springfield, Henry Keyes, Newbury, John Jackson, Brandon; Recording and Corresponding Secretary—Daniel Needham, Hartford; Treasurer—J. W. Colburn, Springfield; Directors—Frederick Holbrook, Brattleboro', E. B. Chase, Lyndon; H. S. Morse, Shelburne, D. R. Potter, St. Albans, Henry G. Root, Bennington, David Hill, Bridport, John Gregory, Northfield, Elijah Cleveland, Coventry, Nathan Cushing, Woodstock, George Campbell, Westminster.

For the New England Farmer.

HINTS ON BUYING FARMS.

One of the most difficult operations that the young farmer has to encounter, when first setting out in the world, is the selection and purchase of a farm. Unlike buying a horse or cow, which can be disposed of again at a slight sacrifice, if they do not suit, the farm cannot be sold every day, if it be a poor one, even at a sacrifice. It is necessary, therefore, to be very cautious in getting a farm which is probably destined to be your home for life.

In the first place, no man should buy a farm unless he is resolved to live on it all his days, and having made that resolution, let him look for one that he can be contented on, or he had best not buy at all, for a discontented farmer is a pitiable object.

The location of a farm must be noted, as there is a great difference in the products of different farms of like fertility, but differently situated. A farm sloping to the south, or east, should be preferred to one descending to the north, or west, for several seasons, viz: the land is warmer, and the crops start quicker in the spring, and mature earlier in the fall, thereby escaping early frosts. The land is generally dryer, and does not need as much underdraining, and is not as liable to heave, as land sloping to the north. A southern slope is better for fruit trees and vines, as they are not so much exposed to the bleak north winds in winter and early spring, which prove so destructive to fruit trees in New England and eastern New York.

The next great object sought should be good water, and plenty of it. A farm with plenty of springs and running streams, is worth from one-fourth to one-third more than one on which the water has all to be drawn from a well. Luckily, most New England farms have running water, which accounts for the great superiority of their stock over that in sections that are poorly watered. Stock of any kind thrive a great deal better when they have an unlimited supply of pure water, than when their drink is drawn from a well by a negligent man; and they sometimes get not more than half enough, or they have to drink at some muddy pond of standing water.

Another very important consideration is, the buildings; and in looking for a farm, always bear in mind that good buildings can be bought a great deal cheaper than they can be built; or, in other words, the difference in the cost of a farm without buildings, and one with them, is not, as a general thing, one-half enough to put on the buildings. The young man just starting in the world, unless he have rich relations who are willing to assist him, cannot afford to buy a farm and then go to building, so he must needs live in the old house, and use the old dilapidated out-buildings, for a great many years. So he lives on, suffering a great many inconveniences, and subjecting his cattle to exposure, and sometimes his family, also, for the want of comfortable shelter, and perhaps expending money enough in patching up his old buildings every year to pay the interest on the cost of new ones. The want of fences is another serious drawback on a farm, especially where lumber is as expensive as it is in most of the thickly settled districts of New England and New York.

In choosing a farm, always look for a good wood

lot, so that the fire can be kept going and the fences in repair; and if you have an occasional load of wood to sell your neighbor who has no wood lot, the proceeds will help pay the interest money.

In selecting a farm, be sure not to buy poor land. It is better to buy good land, with poor or no buildings, than to buy poor land with good buildings; for on the good land you can soon make the buildings, but on the poor land you can not make the interest.

There is prevalent among farmers an erroneous idea in regard to the price and relative property of farms. For instance,—we will suppose two farms for sale; one at \$40 per acre and the other at \$80 per acre, and we will suppose that the one at \$40 will produce 35 bushels of corn to the acre. Now one-half of the farmers would say, the farm costing \$80 per acre, should produce 70 bushels of corn to be as cheap as the \$40 farm. But this is a great error. We will take the figures of one of your contributors some years ago, which made the cost of raising an acre of corn at \$26, if I remember right, (but which I think is too high,) and see what we make on an acre of corn which produces 35 bushels. Call the corn worth 75 cents per bushel, and 35 bushels will come to \$26,25, from which deduct \$26,—which includes interest, taxes and all expenses,—and we have just 25 cents profit, rather a small payment towards our \$40. Now we will suppose the other farm to yield 50 bushels per acre, which, at 75 cents, will be \$37,50, from which deduct \$26, and \$2,80 interest on the extra \$40, and we have \$8,70 profit to pay towards the principal; so it is evident that the \$80 farm is cheapest, for \$8,70 per year will pay \$80 sooner than 25 cents will \$40. In buying a farm, we should see that there is not much waste land, as that has to be paid for as well as the good, but brings in nothing. What I mean by waste land is, ledges and places that do not produce anything. Swales, and swamps, even, if not too extensive, are by no means waste, as the former produce a great deal of feed, and the latter can be drained, and their contents are of great worth as manure, on uplands. Many other things are very desirable, but not of so much importance as the foregoing,—such as the location of the buildings, which should be as near the centre as possible, and be near the water. A farm with different kinds of soil is to be preferred to one with the soil all alike, as that renders the raising of variety of crops difficult and unprofitable. In selecting, reference must be had, also, to the branch of farming which it is wished to engage in; if the dairy, then select a grass farm, and if raising grain, a farm adapted to that, and so on for other branches. In conclusion, I would say, buy a good farm, put on good stock, use good tools, and take good care of them, and you will make a good, honest living, and soon have your farm paid for; after which you can take the world a little more easy, letting your children work the farm while you store your mind with the riches of good books and agricultural papers.

AGRICULTURIST.

Oak Hill, N. Y., January, 1862.

GEOLOGY OF MAINE.—A geological and natural history survey of Maine was commenced, last season, by Prof. Hitchcock and Dr. Holmes. They first explored the western border and coast to get

a base line of operations; then, with three scientific assistants and seven boatmen and guides, canoes, batteaux, camp-equipage, instruments and stores, they started up the Penobscot River for the wilderness. They followed the river and its branch to its head waters, and through the lakes across the portages into the St. John waters; meantime dividing into several parties, and returning by different routes. Their reports, which are now being printed, show the discovery of statuary marble, equal to the Italian; immense beds of marl, some of which contain phosphate of lime, so valuable as a manure; indications of tin, copper, etc. Indeed, native copper has been found in the town of Carrol, Penobscot county, where they suggested its probable existence. The State appropriation for this survey was only \$3000.

For the New England Farmer.

CONCENTRATED MANURES---WILL THEY PAY?

Among all the certificates and reported experiments with concentrated manures that have fallen under my observation, I have yet seen none that showed the first thing that a practical farmer wants to know, viz., Will it pay? All agree that guano, Mapes' and Coe's phosphate, poudrette, and many other kinds that might be named, make vegetation grow rapidly and produce large crops, but if those crops cost more than they are worth, no one that farms it for profit, or a living, can prudently invest in that kind of fertilizer. For the dollar invested in any concentrated fertilizer in the spring, should, at least, pay back 100 cents in the fall, in crops, or the investment had better not have been made. This is presuming that it is all exhausted the first season, which is the fact, judging from what experience and observation I have had.

I propose now to give the result of an experiment on a small scale with Coe's superphosphate. My experiment was on a piece of corn. The land was planted the year before, and produced a fair average crop for light pasture lands; I should judge about 35 bushels per acre. Last spring I spread and plowed in shallow manure enough, as I judge, to make the piece good for 40 or 45 bushels per acre; planted the 18th day of May, putting a large tablespoonful of Coe's superphosphate in each hill, with the exception of four rows through a level part of the piece, where I could see no advantage on either side. The frost injured my corn the year before, and although I saved the best I had, and thought it good, I found my mistake, for it being cold, wet weather, not more than two-thirds of it came up, which was an essential drawback on my crop. I put the phosphate in the hill, mixed and covered it with the soil, and the corn came just the same with it, as without it; at least I could see no difference. Where I put the phosphate, the corn grew much the best in the first of the season; at the first hoeing I judged there was near three times the heft of stalks, but after that the weather grew warmer, and the difference gradually diminished. At the first hoeing I put another spoonful of phosphate to each hill, except four rows on one side of the four unphosphated rows. I watched the growth and progress with much interest through the season, and could plainly see

that the unphosphated was gradually gaining on the other, and at harvest time, was satisfied that the unphosphated had about the same corn as that once phosphated, but rather less stalk, and that either of them had less corn, and some but little less stalk, than the four rows that were twice phosphated. But to be sure, and exact, I harvested and kept all separate, dried thoroughly, shelled and weighed carefully, all the corn that would dry sound, making but one sort. I will here state that I weighed the phosphate put on to the eight rows, charged it at cost in the field, and charged a fair price for the time or extra labor of planting and hoeing, of which I kept a strict account, and the result was as follows:

None, 108 lbs., 5 ounces.

Once, 110 lbs., 12 oz.—gain, 2 lbs., 7 oz.; extra cost, 31½ cts.; extra corn cost about \$7 per bushel.

Twice, 140 lbs., 14 oz.—gain, 32 lbs., 9 oz.; extra cost, 49 cts.; extra corn cost about 84 cts. per bushel.

I am rather surprised at the result of my experiment. That ten pounds put in the hill at planting, should make no corn, or only 2½ pounds, and that ten pounds put in at planting, and 6½ at first hoeing, should make 32½, is a difference that I cannot account for under the circumstances, the manure being plowed in, and, as I supposed, would carry the corn out through the last of the season. If there had been no other manure, I should have expected the phosphate to have been exhausted, and left the corn starving just at the time it had got out a large growth of stalk and needed it most. But I am satisfied that to put phosphate in the hill at planting, is money thrown away, unless there is more put on at some later period to carry through the earing and filling out of the corn.

In conclusion, I will say that I am well satisfied for the pains I have taken in experimenting thus far, and intend to try it again next season, and hope that many others will do the same, not only with Coe's phosphate, but with all other kinds of concentrated fertilizers, and give the result of their experiments to the public through the medium of the *N. E. Farmer*.

THOMAS ELLIS.

Rochester, Mass., 1862.

MOSS ON ROOFS.

There is a barn near our farm with a shingle roof fifty years old, and the shingles appear quite as bright, and in as good order, as most shingle roofs at the end of the first year. When built, it was coated with a lime wash tinted with ochre, and fully charged with glue and salt. This formed an agreeable color, and lasted many years; the lime present entirely preventing the growth of moss, and also the development of acetic acid from any sappy portion of the shingles. About twenty years since, it was again re-coated, with the lime wash tinted with amber. This is now pretty generally removed, still leaving an even color to the roof, and to the shingles a surprising freshness of appearance.

We suppose that lime alone put on as a white-wash, would have answered all these purposes, though not so agreeably to the eye, while the wash tinted to resemble the color of the shingle, can never be unsightly.—*Working Farmer*.

For the New England Farmer.

"WILL UNDERDRAINING PAY?"

DEAR SIR:—The question has been repeatedly asked in your paper, "Will underdraining pay?" and as often answered in the affirmative. Yet there is some doubt in my mind about its being a paying operation in all places. For one lot of land, in a certain locality, it may pay well to drain, while with another, equally good, but in a different locality, it would be a losing operation. Or, with the men of capital, it might pay well in the end, while with the farmer, having no resources but the income of his farm, it would be of doubtful propriety. Is, or is not such the fact?

I have a lot of land containing ten acres, which, I doubt not, would be greatly improved by drainage, as it is nearly all too wet for cultivation. About one-half of the lot was formerly a wet, miry swamp, the mud gradually increasing in depth from the outside to the centre, where no bottom has ever been found. It has been partially drained, the old grass roots have decayed, and the surface rendered very easy of cultivation. The remainder of the lot consists of a wide strip on three sides of the swamp, of moist, loamy land. The surface is a black, rich-looking mould. The subsoil, in the dryer parts, is a deep brown-colored loam. This rests upon a hardpan bottom. In the wetter portion it is a fine, slate-colored, clayey substance. This land is located where farms, as they average, are worth \$20 per acre, and hay from \$12 to \$15 per ton. Now, taking into consideration the value of the land and its quality, as described, the worth of hay, the expense of tile and their transportation here, (being twelve miles from any depot,) will it pay to underdrain such land in this locality? Or would you advise filling the ditches in the hard pan with small stones?

How would strips of hemlock board nailed together, answer? Would they be durable and less likely to become clogged than stones? What would be the expense of tile? How long are the pieces, and what is their weight, and where can they be obtained?

One question further. Would it be a safe operation for a man without means to drain and reclaim this land I have described, and depend upon its production for his pay? H. T.

Rutland, Mass., Feb. 4, 1862.

REMARKS.—It seems to us that our correspondent can work out the problem for himself without our help. It appears that the "wide strip on three sides of the swamp" produces nothing now. Suppose he reclaims one acre

At a cost of.....	\$30.00
Manure.....	10.00
Grass seed.....	2.00
	<hr/>
	\$42.00

On such land, he cannot fail to get, the first year, 1 ton of hay, worth, after the cost of making.....	\$12.00
The second year, 1½ tons.....	18.00—\$30.00
	<hr/>
	\$12.00

At the end of the second year, instead of an offensive, unproductive swamp, he has land worth \$100 per acre for agricultural purposes, which has cost him only \$12 per acre, and with proper care

will continue at that value through generations to come. Is it, then, worth draining?

If there is hard pan underneath, and the upper portion is muck, it would be quite likely to wash down and obstruct the flow of water if it were constructed with stones. Stones will answer a good purpose for many years in a gravelly or sandy loam. Simple, open ditches may, possibly, answer the purpose for a time—but they should be dug where the tiles are to be placed, so as to prevent digging again when tiles are to be laid. The cost of tile at the factory is about \$14 a thousand. They are in pieces, each 12 inches long. If hemlock boards could be kept always wet, they would last for a long time; but where changing from wet to dry, and dry to wet, they would soon rot out. Mr. George Campbell, of West Westminster, Vt., says hemlock bark "is as durable as tile, and not half as expensive."

For the New England Farmer.

HUNGARIAN GRASS, OR GRAIN.

MR. EDITOR:—Considerable has been said, for three or four years past, about Hungarian grass; some against its usefulness, but more in its favor. I have cultivated several acres each year, for four years, and having met with uniform success, am now prepared to say I entertain the same sentiments concerning it that I did in 1859, and again in 1860, which were published in your paper.

I continue to cultivate it on account of the uniform and abundant yield of both hay and grain. Of hay, about as much as I could get of any other kind upon the same land, (according to quality, from 1½ to 4 tons per acre,) and of uniform good quality, when I have good weather to cure it. Of grain, from 15 to 25 bushels, weighing from 44 to 48 pounds per bushel, which is received with as great avidity as corn and oats, by all the domestic animals I have around me.

I harvest it as soon as the seed is mostly ripe. At the time of cutting, it requires very much more drying than herds grass does when cut in bloom. With me, I can say horses and cattle are as ready for this hay when well cured, as they are for other good hay. By cultivating this, I have a double crop, either of which is very satisfactory.

Several reasons exist in my mind why this grass has not been more readily adopted by farmers. Many have tried it on a small scale, having sowed a pint, a quart, or even four quarts of seed, as an experiment, and put the result of the harvest into the barn, to receive their attention when they might find it convenient. After awhile they find the seed mostly eaten up by a privileged set of pilferers, ever ready to take their rations in the sheaf, when the farmer is willing to be saved the trouble of threshing in season, and going to mill. This farmer, of course, thinks the result of the experiment not very good. My plan and practice is a different one. I thresh it with a machine as soon as I bring it to the barn, and then carefully season or dry the seed before I put it in the bin.

Some have read in accredited agricultural papers, got up expressly to advance the science of

agriculture, that it is "a coarse, dry, and almost worthless stalk;" "a great exhauster of the soil," &c.; "horses and cattle out West have died from eating it," &c. The word coarse is enough to discourage some. I have never got any too coarse for my cows, and even the calves eat up all the butts greedily. "Great exhauster of the soil." I love to have the soil on my farm exhausted, by getting three and four tons of the richest fodder from an acre. It gives me good hope and firm belief that it will never show exhaustion, if I but feed that acre with the refuse of what was taken from it. "Beasts have died from eating it," is only a story of the man too indolent rightly to apply the best gifts of God for his own benefit. Beasts have been killed outright from eating corn, here in Massachusetts! Yet no paper echoes the fact. To do so would not make one hair white or black, since we all know that such things are brought about by mal-administration.

Some, to whom I have sold seed, with directions not to sow it till the ground is warm, (near the first of June here in New England,) have sowed it in March and April on the cold sod. The result is immediate decay in the soil, or a dwarf existence, which is even worse. From such practice I have often been falsely accused of selling poor seed.

I am prepared fully to testify to the good qualities of Hungarian grass in all its forms, not because I wish to sell seed, as my stock of that is nearly disposed of, but that I would like to have farmers more generally help themselves to every prominent good thing.

WM. RICHARDS.

Richmond, Mass., March 15, 1862.

EXTRACTS AND REPLIES.

MUCK AND CORN FODDER.

I have a large quantity of meadow muck, and wish to use as much as will pay. How much can I add, with profit, to my manure that is made from fourteen cattle, when drawn from the cellar? The muck was thrown out last season, and drawn from the meadow this winter. Would it be advisable to spread and plow in some without being mixed, where I intend to plant? Is it of much service without manure mixed with it?

Much has been said in regard to sowing corn for fodder; I will add my testimony in its favor. Last spring I planted in rows about three-fourths of an acre; the rows $7\frac{1}{2}$ feet apart—in the rows very thick—and hoed it well; the corn was white flat, and grew finely. I used what was needful green; the rest was cut and spread on the ground before the frost came. I let it lay one day, then tied in small bundles and took to the barn, and hung on poles over the floor. I managed to hang two deep in that way, and it cured well, and my cattle will eat it in preference to the best hay. My advice to all who have land that produces but little grass is, to try it.

CHARLES C. GRANT.

Auburn, N. H., 1862.

REMARKS.—On a sandy loam land, an ox-cart load of muck may be spread to every square rod, with advantage to the land, if the muck is of good quality, and has been thrown out to the light and air eight or ten months.

You may add one load of such muck to every

two loads of manure, profitably—but it should be added gradually, as the manure is thrown into the cellar. If it has not been mixed through the winter, apply it directly to the land, and plow it in.

RAISING CALVES.

My method of raising calves agrees in the main with that of Mr. Bassett, as given in the *Farmer* for March 1. In some particulars, however, it differs, and, quite naturally, I think it differs for the better. In common with many other farmers in this vicinity, I begin to give the calf hay tea as soon as he has well learned to drink. This tea is made by pouring boiling water on clover or herds grass, and letting it steep without more boiling. It is very nutritious, digests easily, and in a short time the calf comes to like it quite as well as milk, if not better. I begin to give them about a pint a day mixed with their milk, and as they grow older the proportion of tea to milk is increased.

It seems to me injudicious to feed whole oats to a calf six weeks old. He cannot chew them sufficiently to make them digestible, and it will be found on examination that they pass through him nearly or quite unchanged. I never give oats to a calf till he has done with milk, nor do I overfeed with oat meal or corn meal, unless it be first cooked. Oat meal is preferable to corn; corn meal is too heavy food for calves, except in very small quantities.

WM. W. FROST.

Coventry, Vt., March 4, 1862.

ST. JOHN'S WORT.

The Patent Office folks seem to be laboring under a mistake when they say that "*Hypericum corymbosum* is but little known throughout the country."

On the contrary, it is generally known. I copy from two reliable works.

Gray says, "in damp places common."

"In wet meadows and damp woods, New England to Arkansas."—Wood.

Does not *Darlington* refer to *H. perforatum*? "A hardy plant, prevailing in pastures and dry soils in Canada and the United States, much to the annoyance of farmers."—Wood.

"Pastures and meadows. Introduced from Europe, but thoroughly naturalized, and too well known everywhere as a pernicious weed, which it is almost impossible to extirpate."—Gray.

Those Patent Office people are great blunders.

N.

Georgetown, Mass.

EXACT STATEMENTS WANTED.

I notice that several of your correspondents, in stating their experiments, do not make them exactly right according to my notion; that is, in putting on different kinds of manure. Some would put on a certain quantity of one kind, and so many pounds or bushels of another, and so on, without stating the cost of each.

Now facts are what farmers want. If ten dollars' worth of one kind of manure or fertilizer will produce more value than ten dollars' worth of another kind, then it ought to be stated so in dollars and cents, so that it can be of practical use to the farmer.

C. D. B.

Hatfield, 1862.

IS CLAY DUG FROM BENEATH THE SURFACE A FERTILIZER?

In digging a cellar, I threw out a quantity of stiff, hard clay, which was exposed to the air a few months before winter, and then was frozen and covered with snow. In the spring I set some cabbage and turnip plants in it, and they grew as well, looked as rank, and produced as much as if set in good rich soil; cucumbers, also, flourished exceedingly well. If this proves clay to be a fertilizer, those owning clay farms have an inexhaustible source of manure, and a great inducement to plow deep.

J. H. M.

Westford, Vt., 1862.

REMARKS.—Clay is an important fertilizer, especially when it contains *magnesia*, *potash* and *lime*, which it sometimes does. From the investigations of Mr. Thompson and Professor Way, "On the Absorbent Power of Soils," it has been ascertained that a subsoil, abounding in clay, loam, or mould, has not only the power of arresting ammonia, but of absorbing and retaining "everything which can serve as a manure for plants." The common, yellow earth, on the banks of the roadside, is a fertilizer in a considerable degree and will sometimes bring fine crops.

PROFIT OF POULTRY.

Please publish the following account that I have kept with my hens the past year, from March 1, 1861 to March 1, 1862.

To 13 fowls.....	\$7.67
To keeping.....	38.63
To the use of house and land.....	2.00
	<hr/>
	\$48.30
By 40 chickens sold.....	\$14.00
By 2484 eggs.....	39.34
37 fowls on hand.....	20.00
11 chickens $\frac{2}{3}$ grown.....	3.63
5 barrels of hen manure.....	6.25
	<hr/>
	\$83.82
Deduct the cost.....	48.30
	<hr/>
Net profit.....	\$35.52

Berlin, March, 1862.

W. H. PAIGE.

WEATHER IN VERMONT.

We have had, for a few days past, by far the nearest approach to a thaw of anything we have seen since old Sixty-One left us; and this can scarcely be called more than a "sign of a thaw;" it has, however, relieved most of the roofs of the snow that has been accumulating upon them for the last eight weeks; no small amount, I can assure you. The month of February was, with us, decidedly snowy. Snow fell on thirteen different days; the whole amount was 48.5 inches; the greatest fall in twenty-four hours was 13 inches, on the 19th; the greatest consecutive fall was 14.5 inches on the 19th and 20th. We have had but very little snow thus far this month.

I see by the last *Farmer* that "T. S. F." of Felchville, has a cow that seems to be in a very bad way. Now to save him all further trouble with her, (and she must be exceedingly troublesome in a large dairy,) I propose that he shall send her up this way, and we will exchange with him, as we have plenty of cows around here that

can safely be warranted never to give so great a quantity of milk as to trouble any reasonable man. But if this should not chance to meet the mind of the gentleman, a friend suggests that he feed plentifully on cob meal; if this does not cause her to "dry up," it may be considered a hopeless case.

Calais, Vt., March 13, 1862.

JAKE B.

CULTURE OF LEADING CROPS.

I have thought you might advance the interests of your readers by inviting, at this season of the year, a series of communications on the culture of some of our leading crops. The hay and corn crop have always been more or less written about, as well they should be—but we ought, as farmers, to pay more attention to the culture of the root crop. Allow me, then, to ask you to call for the experience of your readers in the culture of the beet and carrot for feeding purposes; also, of the turnip for same use. I mean short, pointed articles, as to kinds, manner of managing and mode of culture. Also, the experience of our vegetable farmers as to the best kind of *early* potatoes, and their manner of raising the same.

Fall River, Feb., 1862. ALEX. B. MACY.

CURE FOR RINGBONE.

Will some of the readers of the *Farmer* inform me what will cure ringbone on a horse's foot?

March, 1862.

YOUNG FARMER.

REMARKS.—Mr. W. H. Chaffee has communicated to the *Rural New-Yorker* the following: "Make a bag of strong linen cloth, about two inches broad, and eight inches long; fill it with copperas, and tie it on the foot just above the ringbone, and wet it twice each day. Keep it on about four weeks."

The *Ohio Valley Farmer* says,—"Dissolve 1 oz. camphor in 8 oz. spirits of wine; add 1 oz. of oil of turpentine, 1 oz. of spirits of sal ammoniac, $\frac{1}{2}$ oz. of oil oreganum, one big table-spoonful of liquid laudanum; rub well in with the hand for a quarter of an hour, four times a day, and a cure will be effected."

FAT HEIFER AND HOG—CORN COBS.

Mr. A. Benton, of this village, a man seventy-five years old, fattened and slaughtered a heifer in December last, 25 $\frac{1}{2}$ months old, weighing 710 lbs., dressed; also, a hog, 18 months old, weighing 596 lbs., dressed.

Farmers will do well to save their corn cobs to put into their hay, next hay season, as they are valuable to absorb the moisture from hay not sufficiently dry to keep well; mix in the cobs with a little salt at the same time; it well pays.

ISAAC K. DREW.

Barton Village, Vt., March 10, 1862.

PICKLES FOR MARKET.

Will some one of your readers engaged in raising and preparing pickles for market, give an account of their management and success in this department of husbandry?

FARMER JIM.

Deerfield, 1862.

For the New England Farmer.

SOUTHERN ILLINOIS.

MR. EDITOR:—Since the publication of an article on South Illinois in your paper, I have received a letter from one of your readers, making farther inquiries. With your consent, I propose to answer those queries through your paper. Fever and ague is still somewhat prevalent here, although it is far less so than ten years ago. To persons of correct dietetic habits, who are temperate in all things, who keep themselves clean by frequent bathing, (especially in warm weather,) and take plenty of exercise and fresh air, and have pure, soft water to drink, the ague has no terrors, and their liability to diseases of any kind is no greater here than in Massachusetts or New York.

From a record of the weather kept in this county, I make the following quotations: For the month of July, 1861, highest temperature in shade, 105°, on two days only; mean temperature for the month, 68°. January, 1862, lowest point, 2° below zero. Mean for the month, 40° above.

The roads here are not as free from mud in winter as in New England, but they are in summer and autumn. We have much rainy weather in winter, and as a matter of course, all the older roads are more or less muddy, but never so bad as to be impassable. The ground does not freeze half as deep as in Massachusetts, and of course the mud is not very deep, not as much so as in Northern Illinois. The original settlers of Egypt are nearly all of Southern origin, mostly from Tennessee and the Carolinas, and are behind the "Down Easters" in almost everything pertaining to a highly civilized and progressive people. On the completion of the Illinois Central Railroad, eight years ago, the Yankees began to flock in, and now about one-third of the population, in the vicinity of the railroad, are from New York, Ohio and New England, comprising teachers, professional men, mechanics, farmers, and pomologists, many of whom would rank high in their respective callings in the Eastern States.

We have a free school system similar in some respects to that of Massachusetts. All the schools must be kept in operation six months in each year to entitle the district to its share of the school funds, and the Directors can extend the school term to eight or ten months, if they wish. In most of the districts and villages along the railroad, or near it, Eastern teachers are employed. Last year teachers were paid from \$30 to \$50 per month of 20 days; this year wages are reduced 15 per cent.

Good schools and churches are not as abundant here as in New England, but the march of improvement is rapid, and the time is not far distant when the enterprising, energetic and progressive Yankees will have a majority here, and thousands of bushels of luscious fruits will find their way to a Northern market from this once benighted "Egypt."

There are already some four small nurseries here; some of them are being enlarged, and will probably be able to meet the demand, as some of them are branches of larger nurseries in Ohio. Wholesale prices of fruits shipped North from here last season were about as follows: Peaches from \$1 to \$2.50 per box, (½ bushel.) Early apples, from \$2 to \$5 per barrel, (2½ bushels.) Early pears, such as Bartlett, \$5 to \$6 per bushel.

Grapes, Catawba, 10 to 15 cents per pound. Tomatoes, from \$1 to \$6 per box, (3 pecks.) Strawberries, from \$4 to \$8 per bushel.

It pays well to raise peaches for drying and canning. In shipping North, the earliest fruits and vegetables bring the highest price. Gardeners generally plant tomato seed in hot-bed in February, and have fine large plants by April 1st.

I have never seen or heard of any winter-killing of fruit trees or their branches. There are seedling peach trees here 40 years old, and still bearing beautiful crops. The hard winter of 1855-6, which destroyed many thousand peach and tender varieties of apple trees in North Illinois, did no damage in South Illinois, farther than killing a part of the peach buds. Young fruit trees, as a general thing, will grow one-fourth more here during the season than in the Eastern States, with same culture. The Sugar Maple is not plenty enough to be available for sugar making. Sorghum does finely, making a growth of from 9 to 15 feet high.

Our long summers are just the thing for such semi-tropical plants as sorghum, tobacco, cotton, sweet potatoes, castor beans, etc.

In my former letter, I stated that plenty of land could be had for from \$5 to \$50 per acre, according to location and improvements. This includes the buildings, as land which has been partly or wholly cleared of the native forest, generally has buildings of some kind upon it, but the older buildings are rough, cheap tenements. The value at which land is rated, depends more on its proximity to a railroad depot, than the improvements on it. For instance, at this place, (Jonesboro' Station,) unimproved land within one mile is valued at \$40 per acre, while just as good land, which has been partly cleared and cultivated, three miles distant, can be had for \$15; five miles, \$5 to \$10.

The cost or labor of clearing woodland here is much less than in most of the Eastern States, the growth of timber not being as large and dense, except on "bottom lands."

Good springs of pure, soft water are not as numerous here as at the East, although some of them equal the springs of New England. A part of the surface is underlaid with limestone. In the sandstone formation, the springs furnish soft water. Good-sized, durable cisterns can be made for \$25. We have limestone and sandstone quarries furnishing good building material. Also clay suitable for brick and potter's ware.

I will cheerfully give any farther information in my power to those desiring it, if they will inclose a post paid envelope for the reply to their queries.

A. BABCOCK.

Anna P. O., Union Co., Ill., March 5, 1862.

REMEDY FOR RINGWORMS.—The *North British Agriculturist* says that the disease locally known as ringworm or tetter, which shows itself about the head and neck of young cattle, in the form of whitish dry scurvy spots, can be removed by rubbing the parts affected with iodine ointment. The disease may also be combated by the use of sulphur and oil; iodine ointment is however to be preferred. As this skin disease is easily communicated to the human subject, the person dressing the cattle should wash his hands with soap and hot water after each ointment.



THE ROYALE HATIVE PLUM.

For several years past, the plum crop in all this region has been very light,—so light, indeed, that few persons are now willing to devote much time in attempting to raise it. The subject has received the most careful attention, both from cultivators and amateurs, in different sections of the country—but as yet with little encouragement that we shall be able to overcome the difficulties with which we have been contending.

The chief obstacle in the way is the *black knot*,—that has so far gone on in its fatal progress, and has destroyed thousands of trees that promised to reward the cultivator with rich harvests of delicious fruit. No one yet knows how to destroy, or even arrest, its destructive tendencies. The opinions of the most skilful are not unanimous upon what causes the disease, whether it be in a vitiated circulation, or is occasioned by the operations of insects.

If the trees escape the plague of black knot, and show a fair promise of fruit, the curculio comes, and with his sharp pincers opens a little place in the skin and deposits a minute white egg, which, in due time, produces a worm that feeds upon the young fruit until its vitality is destroyed and it drops to the ground, the worm going with it and secreting itself in the soil. to appear again

the succeeding year, and thus perpetuate, forever, this second plague.

This plum is called *The Early Royal*, and *Mirian*, as well as by the name at the head of this article.

The fruit from which our picture was taken came from the grounds of our friend VANDINE, of Cambridgeport. By “some philosophy that we have never dreamed of,” he still succeeds in getting good trees and good plums, in spite of curculio and black knot. Downing’s account of the Royale Hative is as follows:—

A new early plum of French origin, and the highest excellence. It is yet very scarce with us, having lately been received from the garden of the London Horticultural Society. It strongly resembles, both in appearance and flavor, the Purple Gage, or Reine Claude Violette, but ripens a month earlier.

Branches *very downy*. Fruit of medium size, roundish, a little wider towards the stalk. Skin light purple, dotted, (and faintly streaked,) with brownish-yellow, and covered with a blue bloom. Stalk half an inch long, stout, inserted with little or no depression. Flesh amber yellow, with an unusually rich, high flavor, and parts from the stone, (adhering slightly, till ripe.) Stone small, flattened, ovate. Begins to ripen about the 20th of July.

For the New England Farmer.

WHITE, CHESTER COUNTY SWINE.

MR. EDITOR:—An inquiry was made in your paper in November last, about the peculiar characteristics of the Chester county white breed of swine, and also what was their origin. Being interested myself in the last inquiry, I soon after wrote to Mr. Thomas Wood, of Chester county, Pennsylvania—the most extensive dealer in this breed in my knowledge—and proposed the same questions, with others, to him. I copy from his reply as follows:

"They are what we call home-made hogs, having been brought to their present condition by a long course of judicious crossing and careful breeding by many of our best stock men. The origin or first impulse to this improvement was the importation to this county of a pair of very fine pigs, by Capt. James Jeffries. They were brought from Bedfordshire, England, about forty years since. They claim no foreign blood since. As the swine thus imported began to have some notoriety, they were called Chester county hogs, after the county in which they originated, as in England the improved stock is named after the shires or counties in which they originate. The Chester has become the most popular breed of hogs in this country. I have been engaged in breeding thirty years, and shipping them for eight or nine years to nearly every State of the Union, Canada and Nova Scotia, and the demand for them is constantly increasing as they become known. They are a white hog, long, square built, short head, and good ham, and will readily fatten at any age, and we think make more pork to the amount of feed consumed, and in a shorter time, than any other breed. They are easily kept, and quiet, good breeders."

In reply to my question as to their weight when well fattened, at given ages, he says:

"I have known several to weigh 300 lbs., and some over, at 9 months old; also several to weigh between 600 and 700 at 18 months old; several to weigh over 800 at a little under 2 years old, and one to weigh 990 at 20 months old, dressed weight."

My father has been breeding the Chester county hogs for about four years, and his experience fully confirms the opinion expressed by Mr. Wood, that "they make more pork, according to the amount of feed consumed, than any other breed." They are a remarkably hearty and healthy breed, and are the most docile and gentle mothers I ever saw. They combine so many good qualities that they not only are rapidly gaining in their popularity, but of right, should be "the most popular breed in this country." D. H. GOODELL.

Antrim, N. H., March 5, 1862.

A NATURAL CURIOSITY.—A singular instance of the foresight of a field mouse has just been brought under our cognizance. A person clearing the garden ground of Mr. Thos. Thompson, Dalkeith, Scotland, came upon a growing turnip, which he pulled up by the root. Guess his astonishment when he found that the turnip was completely hollowed out as neatly as if it had been done by the chisel of a joiner, and the interior filled by large garden beans. The work, from the size of the hole whence the inside of the turnip

had been extracted, was manifestly that of a mouse, and the object, no doubt, of filling the interior with beans was to provide against hunger in the barren winter weather. Near the place where the turnip was growing there were several stalks of beans, upon which some pods had been left, and it is supposed that the 'cute mouse had helped itself to these. We counted the beans in the turnip—a small one—and found that they amounted to no less than six dozen and two.—*Scottish Farmer.*

For the New England Farmer.

A WORD ABOUT COLTS.

An impression, and I think an erroneous one, prevails with many that colts are injured by early training. That some colts are injured, and their constitutions broken, by cruel and rough treatment, before they have acquired their strength, cannot be doubted; but careful, judicious training, is as important with colts, as with steers, or with children, even. In fact, I believe it true of all young animals intended for domestic use, as of a child, "Train them in the way they should go, and when they are old they will not depart from it."

I have two colts, one eight months old, and the other one year and eight months. They are both accustomed to the harness. The oldest I have frequently used in the sleigh. On one occasion this winter, when the sleighing was good, it has taken me, together with my little son, to Portsmouth and back, a distance of nine miles, each way, with no inconvenience or injury whatever. Some persons who knew the age of the colt, and the distance it travelled, remarked to me, "You will kill that colt."

This remark induced me to write this short article. Without knowing the circumstances, the reader, perhaps, would form a similar judgment—but the colt is large of its age, in good condition as to flesh, and high spirited; and I required it to walk at least two-thirds the distance each way. It was well fed in the city, taken through streets where it could hear various sounds, and witness all sorts of objects—still it was not suffered to tire, or scarcely to sweat at all, and to every appearance was as lively and bright when I reached home as when I started. To have forced it beyond its strength that distance, or half the distance, would have been injurious—but careful training is always beneficial, and we rarely begin too young with anything.

Lambert Maynard, Esq., of Bradford, Mass., the owner of one of the finest stallions in New England, (Trotting Childers,) who has had much experience in raising and training colts, and who has sold some fine colts of his own raising at a high figure, informs me that his colts are all broken to the harness before they are a year old, or as he more properly expressed it, educated. He rarely, if ever, uses a whip. As to its injuring them, to use them to young, he remarked that he never exercised them so hard as they exercise themselves when alone.

So much for early training—and now one word about feeding and exercise. Colts should never be forced with provender, nor stunted for want of nourishing food. My method is to give them as much good, sweet clover hay as they will eat clean,

with a few little potatoes; and with this feed I get as much growth in the winter as, with a good pasture, I get in the summer. On pleasant days, when there is no ice to injure them, they should always have their liberty to exercise out of doors. It is as cruel to confine a high-spirited colt constantly by his halter, as to confine a high-spirited, ambitious child to the house.

Farmers, raise good colts, from the best of stock; keep them constantly growing, without pampering; give them judicious training when young; allow them every favorable opportunity for free exercise, and we shall have what every sensible man or woman admires, good horses.

J. F. FRENCH.

North Hampton, March, 1862.

REMARKS.—Excellent. No suggestions with regard to colts can be more judicious. The highest spirited colt we ever saw, we broke in accordance with the suggestions given by Mr. French. We began by putting on the bridle, only, and continued through an entire month to add various parts of the harness, until he was perfectly accustomed to every part of it. He was allowed to stand with the harness on from morning until noon, when it was taken off, the colt watered and fed, and after dinner a part or the whole harness put on again. At the end of this time we put him to a light wagon, alone, and drove him a mile, and had no trouble with him afterward.

FOWL MANURE.

No manure obtained by the farmer is as valuable as the manure from the poultry house. Of this there is no question, and yet we can hardly answer the question, "In what way is it best to use it?" This manure is made only in small quantities, and it may be that, as a general thing, much of it is wasted. It may be thrown with other manure, muck and refuse on the compost heap, but our plan is to save for *special* purposes, and we generally use it in the vegetable garden, where it is not only valuable, but exceedingly convenient. When dry, it may be sown with onion or other seeds in the drills, at planting-time, and four or five quarts put into a barrel of rain water makes a most superb liquid manure for any beds of young plants that need stimulating. In this form we use it for our melons and cucumbers, as soon as they appear above ground, to put them out of the way of the "bugs," and on beds of cabbage, cauliflower plants, &c., for the same purpose. Celery plants, after being set out in the trenches, may be hurried up amazingly by being watered two or three times a week with this liquid food. If magnificent sweet corn is wanted, half a pint of the dry hen dung, finely scattered in each hill, will give it, and no mistake. If you have been able to grow only hard, hot, wormy radishes, next spring sow the seed in very shallow drills, (not too early) in a warm, sheltered place, then cover the bed with a thin dressing of coal ashes, and water with the liquid hen manure each alternate night, and if the season is as favorable as ordinary, you will have no cause to repent the trial. A little charcoal dust is better than coal ashes.—*Rural New-Yorker*.

LEGISLATIVE AGRICULTURAL SOCIETY.

REPORTED FOR THE FARMER BY D. W. LOTHROP.

The eleventh meeting of the series was held on Monday evening last, the subject for discussion being *Farm Implements*.

Hon. WM. B. CALHOUN, of Springfield, was invited to preside; but he observed that while the subject was important, he was not prepared to say much upon it. Machinery is producing a revolution in agriculture, and our mechanics had been very active, both in hands and in mind, resulting in beneficial effects in all the departments of labor. He would venture to call upon Mr. Howard, as he had consented to speak upon this topic.

Mr. HOWARD, of the *Boston Cultivator*, responded, and believed with the Chairman, that a revolution in farm husbandry was now going on, in this country certainly, and that the ingenuity of American mechanics was proverbial. They take the lead, he thought, of the world. In some of the inventions and improvements in farm implements we owe to America the undivided honor. Some of these are important in the economy of feeding the population of the world. He referred to the Crimean War, and spoke of the scarcity of grain in Europe at that time, and the importance of our sowing and reaping machines in furnishing a plentiful supply. At a later period, also, France and England were deficient in crops of grain, yet we had enough and to spare.

The *Reaping Machine*, Mr. Howard observed, was not in its incipency American—it originating in England, but failing there of being perfect, the genius of this country completed it. In 1851, Mr. McCormick took his machine to England, where it was tested under some disadvantages, on the farm of Mr. Mechi; yet it sustained itself, and not only cut down the wheat, but also English prejudices to American machines. Yet in England it has been somewhat modified to fit it to their heavier crops. The *Mowing Machine* is an American invention. Allen's (with certain modifications) received the first premium of the Royal Agricultural Society, in 1860, and the preference was generally for American machines. The last year, also, we took the first premium in mowing machines.

There are many other implements in which America shines. To the American *axe* there is nothing superior, and we may regard it as the emblem of the civilization of the western hemisphere. Our mechanics, too, take the lead in *manure* and *hay forks*. The old ones were very thick and clumsy; Partridge's are light and superior. In this matter the English are improving. Our improvement in *shovels* has also been great: once we had only those whose handle was driven into a socket. Oliver Ames stands out prominently as the inventor of the American *shovel*, and so of the

spade. He is independent, and still lives. In *plows*, America has likewise distinguished herself. A cast iron one was introduced from Scotland, when Mr. Alger, of South Boston, and Mr. Wood, of New York, began to manufacture them, though somewhat modified in pattern from the Scotch, and we have maintained the lead. Mr. H. here referred to a trial of plows under the patronage of the N. Y. State Agricultural Society, in 1850, where there were 40 different ones in competition, the trial lasting ten days. The result was that Messrs. Prouty & Mears, of Boston, took three premiums for plows adapted to as many different kinds of work. The results were important, and would be permanent. There are some points, however, in regard to plows and plowing, in which we do not compare well with the English. We have lost sight of the adaptation of plows to different purposes, to an extent, and for very heavy soil, he thought the Scottish, and some of the English, superior. Their *harrows*, too, are superior to ours—ours being too heavy. Seed harrows should likewise be light. The English have a potato harrow, and implements for cleansing the soil—rooting out witch grass, for instance; the Norwegian harrow is one, and sometimes the English Grubber is made to do this work. In this matter we have been too inattentive. Our *horse rakes* are very good, but in England they are made with steel tines, and are sometimes used to cleanse their fallows.

Mr. WETHERELL, of Boston, said there was nothing more important than the plow, as it was our chief implement for pulverizing the soil. Our mechanics had done well, but could improve. He had heard the complaint that our plows cut too narrow furrows. Another objection was that they were easily broken, and the most serious was, that they did not perform their work so well as desired. He spoke of a trial of plows in Maine, where the draught was great, and observed that it had much to do with their economy. He alluded to Mr. Pusey's opinion, that while some plows required three horses, others required only one, and it was found that the size was not in proportion to the draught. The construction had more to do with the plow than the weight. To Jefferson we owe much for an improvement in this implement. Our plows are not suited to the West; the best he had seen were made in Illinois. Our material is iron, theirs is steel. Should the mould-board be concave or convex? At the trial in Maine, ours were very hard to hold by the pressure upon the hands, though some run very well; and Mr. John Johnston said this was an important matter. In fact, our plows are defective as they are, and he doubted whether we have one well fitted to pulverize the soil. He considered the question of horses or cattle for plowing. On side hills in England one

horse is used before the other. He also spoke of the importance of using horse-carts, which he thought the most economical, and cited trials of Mr. Pusey, where their great value over others was demonstrated—and we should then require less laboring animals. Some changes are not improvements. A gentleman out West had said to him that there had not been much improvement in plows since Jefferson. Some farmers oppose some of the new machines. One man would not have a mowing machine and horse rake because they cut and gathered too much poor stuff. But two farmers side by side, with different practice, would show the good results of improved implements. Small farmers can hire a mowing machine; and all will find that where one can be used (by the proper preparation of the land) their farms will be worth twenty-five per cent. more than others. The speaker also commended the Clod Crusher as important in pulverizing the soil.

Mr. HOWARD, by way of explanation, alluded to the Grubber, the Norwegian Harrow, and the Clod Crusher, as used in England. As to steel plows on the prairies of the West, their clayey soil sticks to iron, not to steel. Such plows would not be important in all places.

Dr. LORING, of Salem, said it was an extraordinary fact, that the best farming did not always keep pace with agricultural implements. Our agriculture has not kept up with our labor-saving machines. The plows of Italy and Portugal are not much better than those in the time of Virgil; yet those countries have improved in husbandry to a good extent. Our mechanics have attempted to make agriculture easy; hence (together with the high price of labor) our numerous machines. Our hoes and forks are graceful in their form and highly polished, but less substantial. Yet our plows are better. To the Michigan plow there was some objection, but for spring plowing for corn it makes the soil easy, and is the best for sod land for immediate seeding. The cast-iron beam plow was also good. Dr. L. alluded to a horse-hoe and root-grubber bought for him in England by Mr. Howard. He gave some explanation of them, and regarded them as very useful on a farm. As to the working power of a farm, on light lands, he thought horse labor very good, but on rough land ox labor was preferable. Oxen, he believed, would do as much as horses. In regard to cutting hay, he had used mowing machines and a tedder. His haying was done quicker and better by them, but not cheaper than by the scythe. These machines must have two trained horses, and as in connection they are liable to get out of order, he doubted whether they were economical. Our horse-rakes are very good. The hay-fork was important, but there was some question whether we had a good instrument. What we

need is *strong* machines. The handles to our forks, shovels, &c., were too brittle; and he observed that a man once said to him that a rake was harder to winter than a cow. Our hoes are graceful, but not strong; and many of our plows are constructed to sell, not to use; and so with other things—whiffletrees, for instance. But we have good hay-cutters, and his best root-cutter was procured from Chicopee—which implement he described. We much need a good barn-hoe, one that can be got into corners; and a good barn broom was certainly worth mentioning.

Mr. ANDREWS, of West Roxbury, spoke of the importance of the reaper in the West; but even here, an attachment being fixed to it, it would be useful in cutting rye, &c. He also spoke of Cahoon's seed-sower, which sows as fast as a man can walk, and scatters evenly.

Mr. WETHERELL inquired of Dr. Loring if an acre of grass could be cut by the scythe as cheap as by the mowing machine.

Dr. LORING replied, yes. He then spoke of the horses needed for a machine, and attendant expenses, and said if we could get good mowers as cheap as fifty years ago, it would be less expensive. Mowing machines were valuable where labor was high.

Hon. JOSIAH QUINCY, Jr., thought mowing machines very important on large farms, but on small ones would hardly pay. The tedder was a useful instrument for spreading hay, as it would do the work of ten or twelve men. On his own farm he was obliged to avail himself of the labor of men. There were, however, few good mowers, especially among the Irish. At the West, mowing machines must be important. He alluded, also, to the steam boiler, for steaming food for cattle. Prindle's was economical, and good as a boiler or steamer.

Dr. LORING said steaming food for cattle was of great benefit, and alluded to a gentleman who procured a large kettle for the purpose, and made it serve very well.

Mr. WETHERELL objected to steaming food as useless, or worse than useless, and cited cases to prove it—alluding also to the experience of Mr. Peters to the same effect. Mr. Fay's steamer, too, was spoken of.

Dr. LORING replied that Mr. Fay's steamer was a little thing for the steaming of roots, and as they are not improved by the process, it was abandoned. He thought Mr. Peters would find good results from steaming food. He himself thought milk was improved by it, and rendered cheaper.

Mr. WETHERELL rejoined, advocating raw cut food with meal as the best, while Dr. LORING energetically contended for the steaming of coarse fodder; and the debate continued between them till an adjournment was moved.

For the New England Farmer.

"RUNNING OUT" OF POTATOES.

MESSRS. EDITORS:—You will confer a personal favor by giving a solution to the following in your columns, and in my view furnish an answer to an inquiry often made by farmers.

Why is it, that when we have secured some of the best kinds of potatoes, their good qualities will not last more than two or three years?

I once selected two of the best kinds of potatoes with which I was acquainted, and planted them, side by side, in the same field, for three successive years. The first year I noticed no particular change. The second year I *did*, for the *worse*. The third, all their good qualities were gone, by amalgamation, and even their identity lost, so that I abandoned them as comparatively worthless.

Once I planted three kinds, all mixed together, for twenty successive years, without the least deterioration, or change whatever.

What is there in nature that brought about these two results, so entirely different?

WM. RICHARDS.

Richmond, Mass., March 15, 1862.

REMARKS.—Some wiser head than ours must furnish the solution. Perhaps the potatoes you planted were not adapted to your climate or soil, and soon "run out." Who can tell? We have cultivated sweet potatoes for many years, but have always harvested a deteriorated crop, with the exception of a single season, when it was excessively hot and dry. Then the potatoes were nearly of the color and flavor of those brought to us from the South. Those potatoes, "all mixed," which you "planted for twenty successive years," may have been adapted to the climate and soil, and consequently had nothing to do but to grow abundantly, and be good. We shall be glad to receive some more philosophic reasons, if they exist, for the results which friend RICHARDS states.

For the New England Farmer.

A PLAN OF A SHEEP BARN.

One of your correspondents calls for a plan of a sheep barn. I will give you my experience. I should, in all cases, build a barn with a cellar, and locate the barn on level ground, if the land will admit of it, and have the cellar 8 feet deep. Were I to build 60 feet by 36 feet, I would have the posts 26 feet, running from the beams to the bottom of the cellar, and well board in the cellar to the sills of the barn. This would give the cellar 8 feet, and 18 feet for storage. Set the posts to the barn 15 feet from centre to centre—this will leave ample room for sheep racks, and for the sheep to move around. Locate the barn the longest way east and west, doors at each end, grade off 30 feet at an expense of \$9 to each end, and you then have a floor the whole length of the barn; which part may be filled, if necessity requires. On the north side add a shed 14 feet wide, framed to the barn, the posts to the same 15 feet, and extend the roof to the barn, over the shed, and then we have a cellar 60 by 50 feet. If we wish to finish up for sheep, run a board partition from post to

post, north or south, with a window to slide on the north side, and in front a door $3\frac{1}{2}$ feet high, to elevate or depress at pleasure by means of weights, to shut the sheep in, or out, in the yards in front, and we have in this apartment a yard 14 by 50 feet, and so on, as many yards as may be wanted, and bring water to all the yards, on a level, to every trough, and brought in at the bottom, and then there will be no freezing. A barn finished up this way will be found very convenient to haul out manure, and the shed attached will give great additional strength to the main structure—the barn.

If cattle are to be kept in the cellar, the finishing may be made to accommodate them, also, equally well.

H. G.

Walpole, N. H., Feb., 1862.

For the New England Farmer.

RETROSPECTIVE NOTES.

"PLANNING AND PREPARING WORK."—If every reader of this journal would turn to the March No., page 106, and read or re-read this excellent communication from the pen of Mr. GOLDSBURY, and then put to himself the question, do I practice all the planning and preparing of work which Mr. G. here represents as essential to success and prosperity in the business of farming? he would be enabled, if he answered the question honestly, to determine his true position as a farmer.

The purpose of the writer of the article now under notice, seems to have been to persuade his brother farmers that success in their business depends *very much* upon the earnest application, not of their *muscles*, but of their *minds*, in planning and preparing for the work of the busy season of spring and summer, during the comparatively leisure season of winter. Unfortunately, this is a truth of which a great many seem to be either ignorant or regardless; and this ignorance or neglect operates not only to the injury of these individuals themselves, but tends to lower the respectability of the really noble profession to which we all belong. It is from this and similar neglects to employ mind in the management of our business, that farmers are so generally considered and called mere clod-hoppers, and other names manifesting a like disrespect for us and for our profession. Hence it comes that we all suffer in reputation on account of the thoughtlessness and laziness of a part. Hence, too, we derive our right to protest against unthinking, unprogressive characteristics of those who will neither read, nor think, nor study to make advances in the management of their business, but content themselves with plodding on in the footsteps of their predecessors. Hence, too, it follows, that we all owe a debt of gratitude to such men as Mr. Goldsburly for their efforts to convert the unthinking, and plodding routine-followers among us from the error of their ways, and to elevate and give a higher dignity to the profession of providers of the food of the world. Thanks, then, to Mr. Goldsburly for his efforts to stir up his brethren to a sense of the need which there is of applying *mind* as well as *muscle* in the business of farming, and to a practical recognition of the fact that *God has so ordered affairs* that a farmer *must* continually be aiming to make improvements, *must* continually be aiming to do better the next

year than the last, and *must* plan and prepare for his work beforehand, or in winter, so as to be ready to take it up at the proper time, and to do it in a proper, or the best, manner.

And now, supposing that Mr. Goldsburly's efforts and ours have been successful in enkindling in some a determination that every year shall witness some improvement upon farm management, it is quite probable that not a few may be at a loss how to make the reading, thinking, planning and other work of the mind, in the leisure of winter, help the muscles in the busier season, in working out higher success. For the assistance of such I will now give a brief sketch of the way in which a farmer of my acquaintance endeavors to make all his reading, thinking, planning and information or suggestions from every quarter, contribute to his purpose of constant improvement.

First of all, he has a map of his farm on the first page of a writing book made of several quires of note paper stitched together. Of this book he devotes several pages to each of his fields, and every year writes what he calls Historical Notes of the crops raised, the manures applied, and the condition and capacity of the field generally. Another series of pages is devoted to a record of his plans, of the crops to be raised, the manures to be applied, the mode of culture to be adopted, &c., upon each field. This record he generally makes in March of each year, which has very appropriately been called, by the editor of this journal, the make-ready month, when all plans should be matured for the campaign of the season. Then he has a number of pages devoted to a record of what he calls Intended Improvements and Projected Experiments. And finally, he makes a record on the remaining pages, of every suggestion that may occur to himself or come from others, and of every item of information he finds in his reading, which he may think likely to be useful. These he reads over and fixes in his mind, and then proceeds to make his plans, &c., for the coming season.

MORE ANON.

DUTIES ON TREES, PLANTS AND SEEDS.—The *Gardener's Monthly*, published at Philadelphia, states that the "*Massachusetts Horticultural Society* have taken steps to memorialize Congress to impose a duty of 50 per cent. on imported agricultural productions." This may be so—though we have not heard of such action. The *Concord Farmer's Club* recently petitioned Congress to lay a duty upon imported *seeds*, but not upon plants or trees, and gave what we thought a valid reason for such a request.

☞ We learn that Mr. GEORGE CAMPBELL, of West Westminster, Vt., has recently bought four ewe lambs of Wm. R. Sanford, of Orwell, at \$100 per head; fifteen young ewes of Edgar Sanford, of Cornwall, for \$1800; and six breeding ewes of Edwin and Henry Hammond, of Middlebury, at \$1400. The cost of the twenty-five sheep is \$3600. Mr. Campbell is one of the most intelligent and enterprising sheep-raisers in the country.

AMERICAN GUANO.

We have often stated to the reader that we thought a judicious use of some of the specific fertilizers now so common among us might be *profitably* applied to most of our New England crops—not as prime agents, but as auxiliaries, after the farmer has exhausted all his skill and resources in the accumulation of manure on his own farm. This must always be his first aim. When he makes his experiment, however, it should be fairly and *liberally* done; that is, expend a certain amount of money for a fertilizer, and apply it to a portion of some crop, leaving another portion of the crop without it, but under circumstances precisely alike in every other respect; then, by a careful weighing or measurement of the crop, he will be able to learn what the fertilizer has accomplished. The error made by most persons is, that too little of the specific manure is applied, and that it is not spread over a sufficient space, and thoroughly incorporated with the soil. It should be scattered over a square of eight or ten inches, and intimately mingled with the soil around it.

We have realized great success in the use of the *American Guano* on fields of corn, and on nearly all the garden edibles, and think others may derive the same advantages, by using it liberally, say at the rate of 400 or 500 pounds per acre, and by taking equal pains in its application. We are confirmed in this opinion by a statement made by the renowned Baron LIEBIG, which we recently found in the Patent Office Reports. He says:

I have spent two months' labor in the matter. The Baker's Island guano contains more phosphoric acid than any other known fertilizer, and it is similar in its ingredients to natural phosphorite, differing from it, however, in the following remarkable particulars:

Phosphorite is in a crystalized state, and is completely insoluble in water. The Baker's Island guano, on the contrary, is amorphous, is soluble to a considerable extent in pure water, and when moistened, colors litmus paper red. The Jarvis Island guano has also an acid reaction, and is partly soluble in water. It is worthy of remark that the Jarvis guano, although only half as rich in earthy phosphates as the Baker's, gives to water a greater quantity of soluble phosphoric acid. I regard the discovery of these guano deposits as a most fortunate event for agriculture. At the present time the prices of fertilizers, like bones, are now continually on the increase, and soon the agriculturist will not be able to procure, at paying rates, an amount sufficient for his wants. Baker's Island guano, being of all fertilizers the richest in phosphoric acid, will be of especial importance. As far as chemistry can judge, there is hardly room for a doubt that, in all cases where the fertility of a field would be increased by the use of bone dust, the Baker's Island guano will be used with decided advantage. The phosphate of lime in the Baker's Island guano is far more easily dissolved than that of bones; and if we take the proportion

of that ingredient to be 60 lbs. in the latter, 100 lbs. in the Baker's Island guano are equivalent to 140 lbs. of bones. Thus the agriculturist would be benefited as much by using 70 lbs. of Baker's Island guano as by 100 lbs. of bone dust. This guano contains in ammonia, nitric acid, and azotic substances, nearly one per cent. of active nitrogen. A small addition of salt of ammonia would give it the full strength of Peruvian guano.

It seems hardly possible that this guano could be employed without profit, while it contains the well-known nutritive elements which he ascribes to it, and at the prices for which it is now being sold. We hope our farmers will test it in a small way, using it liberally as far as they go, and carefully watching its effects upon the crops. We shall be glad to publish reports of such experiments.

For the New England Farmer.

THE RIGHT THING IN THE RIGHT PLACE AT THE RIGHT TIME.

MR. EDITOR:—It would be well for us, and for all mankind, if we always had the right thing in the right place at the right time. I do not know that this is a practicable thing for human beings; but if it be, we ought immediately to set ourselves about it, and reduce it to practice, because our progress, improvement and happiness depend upon it. This is more than the wisest and best of us do, and perhaps more than we can do, at present; and, if so, it is more than can be reasonably expected of us by others. It is perhaps more than God himself expects us to accomplish at present; and yet he evidently requires us to aim at perfection, and to come as near to it as possible. It would be well for us, therefore, to make this our aim, our constant study and endeavor to have the right thing in the right place at the right time.

Let us apply this motto to some of the operations in farming, and see if we cannot be excited to greater vigilance, punctuality and promptitude. Though there is no such thing as perfection in farming, yet success in the business depends, not only upon having every thing in its right place at the right time, but upon having every thing done at the right time and in the best manner possible. If we fail in either of these respects, we shall be unsuccessful in the business. For instance, if the tools and implements we use in farming be the old antiquated things of a bygone age, so clumsy, unwieldy and cumbersome as to be inconvenient, unhandy and unfitted for use, and ill adapted to the purposes of husbandry, we have not the right tools to work with; and no skill on our part, in the use of such tools, can ever make up for their deficiency. So, too, if we raise the different kinds of animals, but so small in size, so slow in growth, and so mean in appearance, as to be unsaleable and unprofitable, we evidently do not keep the right breed of animals; and no economy on our part can compensate for the want of a better stock of animals. So, too, if we raise all the different kinds of fruit, but so small and knurly and defective and ill-flavored, as to be quite useless and unprofitable; or, if we raise all the different kinds of vegetables, but so stunted and diminutive in size, and so unsavory in quality and flavor, as to be

hardly worth gathering; or, if we raise all the different kinds of grain, but of so unproductive and dwarfish a growth as to be almost worthless, we may be morally certain, that, in each instance, we have not all the right things in the right place at the right time. In all the foregoing particulars, we have utterly failed, either because we have not had the right things, or because we have not used them properly at the right time and place. We must not only have the right tools and implements and animals to work with, but we must have the right breed of animals, the right kinds of fruit, the right kinds of vegetables, and the right kinds of grain; and, to be successful in our operations, we must have all these in the right place at the right time, and make the best possible use of them. What amount of wealth, what increase of the means of doing good and of human happiness, what abundant harvests, what supplies of the necessities and luxuries of life, what protection to life and property, and what security against the accidents and calamities of life, might be effectually secured by always having the right things in the right place at the right time, and by directing them to the accomplishment of their proper objects!

Warwick, 1862.

JOHN GOLDSBURY.

For the New England Farmer.

PLOWING ORCHARDS.

Much was written a few years ago, in favor of keeping land on which orchards were set continually under the plow. If your orchard did not bear well, plow it. If it showed signs of premature decay, plow it. Thorough cultivation was the panacea, and scarcely a dissenting voice was heard. Many people, taking it for granted that those who wrote *knew* what they said to be practically true, followed the directions given in the papers. Orchards were planted, and the land was highly cultivated. In a short time, complaints began to be made that trees did not flourish well. Almost every winter some died; others were deprived of a limb, or had a few frost-bites on their bodies. At length, thought was awakened, and the query arose whether so much plowing was not a cause of decay. This led to observation, which resulted in the conviction of many minds that *too much cultivation* was a prime cause of the early decay of so many fruit trees.

To aid in proving that this conclusion was not groundless, I will mention a few cases that came under my notice. In the spring of 1853, I purchased a village lot on which were a few fine apple trees, some of them six or eight inches in diameter. The ground had not been very well cultivated for a few years, yet the trees were healthy and productive. Wishing to make them grow rapidly, and produce more abundantly, I spaded the ground under them thoroughly and very carefully. They bore well that year. The next spring I again tried spade culture, but I noticed that the earth under the trees, was literally bound together by fine rootlets, and that a great number of them were broken at every shovelful that I turned up. I began to reflect on the utility of these fibrous roots. I thought them analogous to the minute veins, absorbents, and capillaries of the human system, every one of which conveyed a certain portion of nutriment to the body, or to some or-

gan of it; hence I concluded that the process of *constant cultivation* must be injurious.

My fears were realized. In 1855 two of the best trees died. A great many trees died that year in various parts of the country, and the cause was attributed to the weather. I have no doubt that a severe winter hastened the decay, but in this region, the best cultivated orchards were most severely injured. I can mention many instances in further proof of my position, if necessary, but defer it for the present. Suffice it to say, that observation and experience have confirmed me in the belief that orchards *should not be continually cultivated*. The roots of trees naturally run near the surface, but plowing either cuts them off, or sends them down into the subsoil, which, in most cases, yields no nourishment to plants, and is generally too hard to be penetrated by the tender roots of an apple tree. Hence the tree, being deprived of the requisite amount of light and heat, and of the proper nourishment to supply its wants, languishes and dies. I believe this to be a rational view of the case, and I doubt not that a vast amount of experience will be found coincident with mine.

That orchards need occasional plowing, and that the soil should be kept in good condition by the frequent application of manure, I do not doubt; but I would not recommend plowing very near the trees. A space nearly as large as that covered by the branches, should be left. Thorough annual top-dressing will keep the soil sufficiently loose. If the soil around the body of the trees should become too stiff, it may be carefully removed, and its place supplied by coarse stable manure, or the scrapings of the chip-yard.

Let this process be adopted, and I believe our orchards would be more hardy, more thrifty, and consequently, more productive. L. VARNEY.

Bloomfield, C. W., 3 Mo., 1862.

VEGETABLE GARDEN.—In the open air, peas and potatoes are about the first crops to be attended to. Of the former, the varieties have now become so numerous that even "new grapes" will soon have to give way in that respect. The earliest are the Prince Albert, and the "Extra Early-ies."

Of early Potatoes, we think Fox's Seedling is the earliest, though in some localities the preference is given to the Early Walnut. Beets, the Early Six Week Turnip rooted, is perhaps the earliest. Carrot, the Early Horn; Cucumber, the Early White Spine, or Early Cluster; Lettuce, the Silesian, or Early Curled—to cut before heading; and the Early Butter left to head, are the first in season. Amongst the Radishes, the Old Short Top, and Red and White Turnip are still ahead; and in Spinach, the old Round-leaved—*Gardener's Monthly*.

PRUNING A CLIMBING ROSE.—In pruning a climbing rose, all the very strong and vigorous shoots of last year should be preserved, and all weak and decayed ones, as well as old shoots exhausted by abundant flowering, should be cut away. It should also be an object to get good strong shoots as low down towards the root as possible, as the finest flowers, coming from the strongest shoots, are thereby equally diffused over the plant.

For the New England Farmer.

PROPER TIME TO PRUNE FRUIT TREES.

MR. EDITOR:—I have derived much pleasure and benefit from reading the different views of writers in the *N. E. Farmer* pertaining to the same branch of agriculture. For a few years past, much has been written and said by yourself and others, in regard to the best season to prune fruit trees, and from what I could gather from others, and experiments of my own, I had become pretty well convinced that the best time to prune was the latter part of June, or the first of July. But in reading the discussions of the Legislative Agricultural Society, in the *Farmer*, recently, I confess that I felt somewhat nonplussed to find such thorough practical men as Marshall P. Wilder and A. G. Sheldon pronounce March the best time for pruning. I should have been gratified if they had more fully given their reasons for their conclusions. Mr. Sheldon said he had sawed a limb from his tree each month, and found March the best time. Now, Mr. Editor, I have tried the same experiments, and have come to a different conclusion. I have found where a limb was sawed off in March, before it would begin to heal over the wound, the stump would get seared so that it would not commence to grow over immediately at the end of the stump, but often one-fourth or one-half inch down from the end; but where I have sawed them from the same tree in the same year, and as near as possible the same size limbs, I have found the stump or wound, where the limb was sawed off in June, to heal over, often in one, and sometimes in two or three years sooner than those cut off in March.

I think there are some arguments in favor of winter or early spring pruning. We generally have more leisure, can get at the work easier, are less liable to damage other crops, and perhaps a saving of the sap which would go to nourish the tree, lost in the limb if left until June. I have found it to work well, on some occasions, to cut off limbs in winter, or early spring, leaving a stump three or four inches long, and in the following June, saw the stump off smooth and close to the body or main branch, always coating over the wound with shellac dissolved in alcohol, which can be kept in a bottle and always ready for use, and will keep any length of time if corked up tight. A good way is to put a small brush into the cork so that it will be inside the bottle, and immersed in the liquid when corked, which will keep it from getting dry and hard, as it soon would, if exposed to the air.

Perhaps Mr. Wilder or Mr. Sheldon will explain more fully their reasons for coming to their conclusions, through the columns of the *Farmer*, and thereby gratify myself, and I doubt not many others who have much confidence in their sound, practical judgment. I know that you entertain a different opinion upon the subject from theirs.

Ashburnham, March, 1862.

W.

REMARKS.—Sound doctrine, every word of it, and doctrine, too, for which a sound physiological reason can be given. We supposed the gentlemen referred to intended that the pruning done in *March* should take place early in the month,

before the sap begins to flow freely. But it is a dangerous time, as a few warm, sunny days at that season, will set the sap into great activity, and if the sap vessels are cut off at that time, the sap will run out just as certainly as that water will run down hill. Nature, herself, indicates the proper time to prune, and it is not her fault, but ours, if we do not study her operations, and learn when to do it. The rule is a simple one; *prune when there is the least sap in the sap vessels or sap wood*; that occurs about midsummer, when the thin watery sap has visited the most remote twigs and leaves, has become elaborated into a substance entirely unlike that which so recently passed up, and is going down directly under the outer bark of the branches and stem of the tree, and plainly increasing their diameter. This is the favorable time to prune, because there is comparatively little sap left in the sap vessels to run out, if they are cut off. This period occurs not only in midsummer, but in the autumn, after the leaves have fallen, and will continue until a few warm and genial days intervene, when the sap sensibly feels their invigorating power, and especially if the ground, at the time, is not frozen. There is another reason why March pruning is dangerous. When a limb is cut off, the mouths of the pores are left open, and will not dry and contract as they will in warmer weather, so that if warm days ensue, and the sap is set in motion, there is nothing to prevent its running out. Winter pruning is more safe, because there is more time for the wounds to dry and contract.

For the New England Farmer.

AMERICAN GUANO.

MR. SMITH—*Sir*:—I read with interest your article in the *Farmer*, on the use of American guano for renovating pasture lands. Will you have the goodness to inform me, through the *Farmer* or otherwise, how much should be used to the acre, and any other facts that may be of use, as I have some pasture that I want to improve.

How will it operate on moist land?

Would it be beneficial to mix plaster with the guano?

H. HAYNES, JR.

Sturbridge, March 14, 1862.

MR. EDITOR:—In answer to my friend in Sturbridge, and others who have addressed me, asking to be further informed through the *Farmer* or otherwise, in regard to the use of American guano, permit me to say that the quantity per acre depends on circumstances, such as whether the land is to be plowed or not—and how often it will be convenient to plow it. If I had pasture land which I wished to renovate, and could plow it, I should, after properly preparing it for grain and grass seed, or grass seed alone; apply from three to five hundred pounds—three hundred pounds is as small an amount as would be advisable. On most lands I should apply at the same time about

the same quantity of plaster, either mixed with the guano, or sown at the same time. If the land did not admit of plowing, I should apply as large a quantity with plaster, as a *top dressing*, and which ought to be applied as early in the season as the state of the land will permit. I have never applied the American guano to wet land. My impression is that it will not pay to spend manure of any kind on wet or moist land, until *under-draining* has relieved it of its surplus water. So long as the soil or subsoil is kept cold by undue moisture from above or beneath, no amount of manure will coax a generous vegetation from its bosom.

No fear need be entertained of injuring seed of any kind by coming in contact with the American guano. Some persons have supposed it almost valueless because it gives off no *pungent odor*, but it must be remembered that this guano contains very little *ammonia*, which alone gives the peculiar pungency to Peruvian guano. In purchasing, be careful to get the "American Company's Guano."

T. A. SMITH.

Westboro', March 20th, 1862.

For the New England Farmer.

PROTECT THE BIRDS.

The following thoughts, written as a school composition by a young lady under my instruction, breathe so much kindness for the feathered tribes, and are expressed so familiarly, that I thought them worthy of publication; and knowing that the Editor of the *Farmer* is an able advocate of the rights of "our mutual pets," I will entrust it to his care.

L. V.

BIRDS.—I have for a long time wished to communicate with my young friends, and bespeak their aid in protection of our mutual pets, the birds, that are inviting our attention and kindness by their sweet songs, and lively, coquettish ways. They flock around our dwellings, and, if properly invited and noticed, accept our hospitality, and repay us a thousand fold for all we bestow upon them. When we take the trouble to provide a few houses for them, how readily are they taken possession of, and how fiercely are they guarded, should any intruder dare attempt to rob them of their home, showing how dear the possession is. This also shows us that nothing is required, but shelter and protection, to enable us to have flocks around us sufficiently tame to be our household friends and companions. But especial care should be taken to guard them against the thousand dangers that beset them in the shape of rude boys, and cats, their mortal enemies. Worse than useless will have been all our trouble, if these deadly foes are suffered to molest them. Let us all protect the birds.

S. E. C.

Bloomfield, C. W., 1862.

EARLY ANNUAL FLOWERS.—Of annuals that may be sown early there are some that are so very beautiful, and which do so well generally, that they at least should be grown. These are a few of them: *Caccali coccinea*, *Coreopsis Drummondii*, *Erysimum Peroffskianum*, *Escholtzia Californica*, *Malope grandiflora*, *Marvel of Peru*, *Nemophila insignis*, *Phlox Drummondii*, *Mignonette*, *Whitlavia grandiflora*, *Clarkia pulchella*, *Gaillardia picta*,

Palafoxia texana, *Linum grandiflorum rubrum*, *Lobelia gracilis*, White and purple candy-tuft, and *Phacelia congesta*. Where a hotbed can be commanded, many of the tender kinds can be forwarded under glass.—*Gardener's Monthly*.

For the New England Farmer.

DECLINE OF THE HEN FEVER.

It has, in fact, disappeared entirely from my neighborhood, and hens are voted a nuisance. The old gilt weathercock that surmounts our village spire, is the only rooster in sight, and he owes his continued existence to the exalted position he has occupied for more than a half-century, as indicating for everybody which way the wind blows, and warning all not to deny their Master as Peter did. Yet this is a farming community, where every barn-yard used to be vocal with crowing chanticleers, and cackling biddies, emerging from some hidden nook where they had just deposited a fresh treasure, innocently supposing it safe.

Only here and there will you now detect the once familiar notes, and keeping poultry hereabouts has come to be the exception, rather than the general rule, because, say my neighbors, it don't pay; and worst of all, tends to scratch out the rules of a good neighborhood. But in face of these objections, I, for one, have persisted in maintaining a hennery, without being conscious as yet of any such *fowl* result as has constrained others to dispense with it entirely. Every farmer, to be sure, has his pets, and chickens have been mine; never, however, caring to be classed with "poultry fanciers" that used to kindle so with enthusiasm at sight of a shanghai rooster. To the mere matter of economy, therefore, my attention has not been so closely directed as it might have been otherwise—only I am satisfied it has not been a *losing* business. Week after week, when eggs could hardly be obtained by my neighbors for love or money, my own larder has been supplied with the genuine article warm from the nest, in midwinter, and all through a season when folks usually imagine laying hens to have suspended operations till spring. In fact, the wonder is that so many of them survive the cold snaps at all, when you see them skulking, chilled, away to roost, hopping from pillar to post, and gleaming a scanty subsistence in spite of wind and weather.

Nothing, after all, will so disarm the prejudice against keeping hens, as to have them laying at a time when, considering the high price, they may be almost said to lay "golden eggs." And all that is needed to secure this result, is some sort of a hen-house where the sun comes in through a good sized south window, and the cold is kept out by what simple weather-boarding will answer the purpose. Then, as the *Farmer* has often reminded its readers before, hens thus confined must be supplied by their keeper with such variety of material as when at large they provide themselves with, to form the egg. Of course, every intelligent reader understands what—a chunk of meat that any butcher will give away, thrown in among the biddies where they can pick it at their leisure, and if frozen, lasting all the longer. Then pounded bones and shells, or simply a box of air-slaked lime at hand, to guard against the contingency of an egg without a shell, or a mere abortion, for

want of the proper supplies, that often results in the death of the victim in the very act of laying.

In a word, let hens be cared for as an acquaintance with their habits and necessities will readily indicate, and my humble testimony is cheerfully added to the mass of evidence already furnished by others, that have entered more largely into the business, to prove that hens will pay their way in fresh eggs, even through the winter. As for the best breed, my experience has been in favor of crossing the common variety with the Dorking, Chittagong, or Bolton Grey; at any rate, some cross, rather than the native breed alone. Now, neighbors, please give the hens a new trial, and better chance than of old.

W. E. B.

Long Meadow, 1862.

HOW TO RAISE ASPARAGUS.

"A Subscriber" would like to know what season of the year is best for setting out asparagus beds, and the best method of doing it.

Ascutneyville, Vt., March, 1862.

REMARKS.—We reply with pleasure, because we believe that not one-half of our readers enjoy the luxury of eating asparagus plentifully, and receiving its healthful influences as an article of food.

There is no mystery whatever in raising it. In order to do it thoroughly, so that it will produce fine crops for fifty years, select a piece of loamy land, such as would bring a good crop of corn. It should be drained land, or at least such as will not retain standing water either on the surface or in the subsoil. A piece thirty-five feet square will produce asparagus enough for a common sized family—say six or seven persons.

Commence on one side and throw out the earth two feet in width, and to the depth of eighteen inches,—or twenty-four inches will be better,—and then throw into the trench as much coarse barn manure as you can afford. Then go back on the bed and throw two feet more upon the manure deposited in the first trench; but in the meantime mingle some older manure freely with the soil as it is thrown over. In this way continue until the bed is finished. This will give a depth of two feet of pulverized soil, mingled with manure, with a bed of manure for its base; one upon which a plant of any reasonable habits ought to flourish exceedingly. Before planting, there ought to be twenty-five bushels of old, rich compost spread on the surface and raked in.

KIND OF PLANTS, AND SETTING THEM.

The plantation may be made in the spring as soon as the soil becomes friable and pleasant to work. Do not attempt to raise the plants from the seed. Let those do that who make it a business—the farmer cannot wait for so long a process. Do not procure plants less than two years old, and if they are three, a crop will be realized

so much the sooner. They should be fresh, and such as have made a good, healthy growth. Such plants may be plentifully found in Boston market, in April and May, at a cost of from two to four cents per root, or cluster,—for the *stools* have a crown, which throws out a large number of long, slender roots.

The ground being thus prepared and laid level, strain your line along the bed six inches from the edge; then, with a spade, cut out a small trench or drill close to the line, about six inches deep, making that side next the line nearly upright, and when one trench is opened, plant that before you open another, placing the plants upright, eight or ten inches distance in the row, and let every row be eighteen inches apart.

The plants must not be placed flat in the bottom of the trench, but nearly upright against the back of it, and so that the crown of the plants may also stand upright, and *two or three inches below the surface of the ground*, spreading their roots somewhat regularly against the back of the trench, and at the same time drawing a little earth up against them with the hand as you place them, just to fix the plants in their due position until the row is planted; when one row is thus placed, with a rake or hoe draw the earth into the trench over the plants, and then proceed to open another drill or trench, as before directed; and fill and cover it in the same manner, and so on till the whole is planted; then let the surface of the beds be raked smooth and clear from stones.

Some gardeners, with a view to have extra large heads, place their plants sixteen inches apart in the rows, instead of twelve, and by planting them in the *quincunx* manner, that is, by commencing the second row eight inches from the end of the first; the third opposite the first; and the fourth even with the second, the plants will form rhomboidal squares, instead of rectangular ones, and every plant will thus have room to expand its roots and leaves luxuriantly.

WINTER DRESSING OF ASPARAGUS BEDS.

About the beginning of November, if the stalks of the asparagus turn yellow, which is a sign of their having finished their growth for the season, cut them down close to the earth, carry them off the ground, and clear the beds from weeds.

Asparagus beds must have an annual dressing of good manure; let it be laid equally over the beds, two or three inches thick, after which dig in the dung quite down to the crowns of the plants, by which means the roots will be greatly benefited; as the winter rains will wash the manure down amongst them. The beds will be greatly benefited if covered to the depth of several inches with leaves, seaweed, or long litter from the lively stables.

The seedling asparagus should also have a slight dressing, that is, to clear the bed from weeds, and then to spread an inch or two in depth of light dung over it, to defend the crown of the plants from frost.

SPRING DRESSING OF THE BEDS.

This work should be done from about the latter end of March to the middle of April, just before the buds begin to rise. After clearing away all the long litter, or whatever may incumber the ground, spread the short dung over the whole surface, and dig it in; if the alleys be dug at the same time, it will be very beneficial to the plants. Care must be taken at this season not to wound the crowns with the tines of the fork, but forking the bed should not be neglected; as the admitting of sun and rain into the ground induces the plants to throw up buds of superior size; to promote such a desirable object, the ground should be kept clear of weeds at all seasons, as these greatly impoverish, and frequently smother the plants.

Asparagus plants will not produce buds large enough to cut for general use, in less than three years from the time of planting, but in the fourth year, when the shoots are three or four inches high, they will bear extensive cutting, which should however be discontinued when no large buds are thrown up. The best way of cutting, is to slip the knife down perpendicularly close to each shoot, and cut it off slantingly, about three or four inches within the ground, taking care not to wound any young buds coming from the same root, for there are always several shoots advancing in different stages of growth.

The above directions are intended for family gardens.

EXTRACTS AND REPLIES.

SUPERPHOSPHATE—FLAX.

Will you please inform me whether Coe's Superphosphate of Lime can be economically used as a top dressing for old pastures and worn-out mowings? Is it lasting in its effects, or does it act only as a stimulant? How much superphosphate is equal to one cord of rotten barn-yard manure for this purpose? How much is equal to one hundred pounds of poudrette?

Can you, or any of your subscribers, answer the following questions in relation to flax, viz.:

How much of the fibre is a fair crop, per acre? What is the chemical process by which the flax is rotted, and what the cost, per hundred pounds of fibre, of rotting by said process? Where, and at what prices, can the most approved machinery for dressing be obtained? What is the cost per hundred pounds, of dressing by such machinery? And where, and at what price, could the fibre probably be sold.

Much has been written within the last few years of the profits of flax-raising, and the policy of producing it as a substitute for cotton. There is no

doubt that much of the soil of Vermont is well adapted to flax-raising, and many would doubtless raise it if they knew how to dispose of it so as to make it profitable. By answering the above questions you would enable farmers to act understandingly in the matters to which they relate, and oblige at least one subscriber. ADIN BUGBEE.

Snow's Store, Vt., March, 1862.

REMARKS.—We are now experimenting on old pastures, with Coe's superphosphate; have had no results yet. Nothing will restore "worn-out mowing" but re-seeding, because there are few roots there to be restored, of the kinds of grass wanted. The superphosphate must be quite permanent in its effects. We have not the means of answering your other questions so as to give reliable information.

LIME FOR SPRING WHEAT—WHEN TO PRUNE ELMS—SALTING CRANBERRY PLANTS—DITCHING CLAY LANDS.

I wish to learn through the *Farmer* the best method of applying lime for spring wheat on a piece of gravelly loam, where there was corn last year. There are about forty young apple trees on the piece. Would it be beneficial to the trees?

When is the best time to prune elm trees? I have one of over a century's growth; the top is beginning to die, and it is my wish to save it for shade, if possible. Could not the top be cut off, say a part of the branches each year, and have it sprout out again?

Which is the best way to set out cranberry plants? I have a small meadow I wish to set out this spring, and I want to know the best way to do it and secure a good crop in three or four years. There have been several ways tried about here; some have failed, and the others have not done as well as was expected, leaving us in the dark?

How is the way to manage a piece of clay land where the banks of ditches will not stand the frost.

YOUNG FARMER.

Franklin, March, 1862.

REMARKS.—Sow the lime at the time of sowing the wheat, say from five to ten or fifteen bushels per acre. It will probably be as useful to the apple trees as to the wheat.

Prune the elm when there is the least sap in motion—in midsummer, or soon after it has shed all its leaves next fall. The tree may be renovated by the process you speak of, if you protect the wounds from the weather.

See an article on *Planting Cranberries* in another column by Mr. Addison Flint.

Drain your clay lands with tile.

TO DESTROY WARTS ON A COW'S TEATS.

In answer to your East Bridgewater "Subscriber" I would say that I have a young cow whose teats last spring were covered with warts. I took the water that baking beans, (common pea beans) had been soaked or boiled in, and washed the teats twice a day, for a week or so, using a shallow three-pint pan, so that I could wet all the teats at once, leaving the water to dry on them.

The warts all disappeared in two or three weeks, and the teats are now perfectly smooth and free from warts.

G. W. H.

Watertown, March 24, 1862.

WARTS ON COWS' TEATS.

I wish to inquire of you, or any one who can inform me, through the *Farmer* how to remove warts on a cow's teats and bags. I have a young heifer twenty-two months old which gives milk. Her bag and teats are covered with small seed warts, such as are usually found on the teats of cows.

A SUBSCRIBER.

East Bridgewater, March 10, 1862.

REMARKS.—Some persons tie a horse hair around the wart when it is well-defined, tightening it occasionally, when it will eventually drop off. "T." in the March number of the *Farmer* for 1860, says "equal parts of lamp oil and molasses will cure the worst of warts on man or beast."

SAWDUST FOR BEDDING.

I have frequently seen mention in your paper of the use of sawdust for bedding for horses. I have used it for the last ten years for horses and cows, and would not be without it, if I could obtain it by going four miles for it. My cows go from the barn in spring as clean as they come from the pasture in fall. I think if our milkmen would try it, they would find a very great convenience in the milking operation, and, besides, their customers would not complain so much of the milk having a barn taste.

T. CROSS.

LEAKS HER MILK.

I have a valuable cow, who for two summers past, has leaked her milk—the milk dropping from her most of the time, and instead of giving eight or ten quarts, as formerly, would only yield two or three. I have tried milking at noon without any benefit. She is about to come in again, and I am anxious to know of a remedy. Can you or any of your readers aid me?

C.

Abington, March 20, 1862.

MARINE MANURES.

A portion of the report of the Secretary of the Maine Board of Agriculture for 1861 is devoted to an elucidation of the value of rockweed and fish as fertilizing agents. The matter was personally investigated by the Secretary, who traversed the whole length of the seaboard for the purpose. Rockweed and musclebed have long been used to a limited extent and with satisfactory results, but they are too bulky and heavy for long transportation into the interior, although they prove of more value the further inland they are carried. A more important fertilizer is found in the migratory sort of fish which swarm on the coast, such as menhaden, commonly called pogies or hard heads, and herrings, which can be taken in immense quantities. The business of catching them has of late years assumed considerable importance in some of the shore towns, especially of Hancock county, in the manufacture of fish oil from pogies, and many

vessel loads of oil are now annually exported and sold to be used chiefly in the preparation of leather. The fish are first boiled, and then pressed. After pressure there remains a pumice or chum, as it is called, which was formerly thrown away, but has latterly been used in a rough way for manure, and mostly with good results, but not always, as so active and powerful a substance should be thoroughly composted or prepared and used with care. The yield of hay on some farms in the shore towns has, within a few years, been increased from half a ton per acre to two tons, from the use of "pogy chum."

The "chum" is dried by exposure to the sun and air, upon a platform, with a shed to protect it from rains and fogs. It is then ground and packed for transportation. One man at Eastport made 150 tons of this "fish guano," as it is called, last year, from herrings, which was sold to go to Connecticut, where the manufacture and use of fish guano has created a greater demand than can be supplied by the amount made there. It readily commands \$30 per ton, which pays so well that he is extending his business.

For the New England Farmer.

CRANBERRY CULTURE.

The first requisite for success in cranberry raising is to select a piece of land which can be flowed in the winter. The best land, in my opinion, is a level swamp so thickly covered with trees or bushes as to exclude all grass and weeds; ditch it so that the water can be drawn off to the level of the swamp, build a dam and cover the swamp with water. After it has frozen, in the fall of the year, cut the trees and bushes even with the ice. Then by raising the water a few inches the stumps will be covered and at the end of the next summer you will have a swamp "without any green thing" growing upon it. Clear off or burn the bushes, and the ground is in readiness for the vines.

There are many advantages in spring setting, but at whatever time they are set, the vines should never be placed more than eighteen inches apart, and as much nearer as time and the abundance of your vines will admit; the closer the vines are set, so much the sooner will there be a crop of berries, and so much the less will be the trouble of weeding.

I have never seen vines flourish as well with the same amount of care, as in swamp land treated as I have above described; weeds of all sorts will come in, but they can be pulled out as easily as from a carrot bed.

I have seen cranberry yards prepared by plowing and cultivating meadow lands until completely subdued; by taking off the sward ten or twelve inches in depth, and by covering with sand from three to five inches in depth; but all of these methods I believe to be inferior in their results to the way which I recommend.

My method has the double advantage of procuring a better and surer crop, and of doing it at a far less expense.

The most successful experiment in cranberry raising that I have ever seen, is in a small pond-hole, which, without any natural outlet, retained the water so late in the season that the only vege-

tation it sustained was a soft carpet of moss. This being drained, and set with vines, has produced a large crop of berries, very superior in size and color; the location being such that they could remain on the vines till late in the season without danger from frost.

CRANBERRY VINE WORM.

Last June nearly an acre of my best cranberry vines presented an unusual appearance. The young shoots seemed to be blighted, and I soon found webs forming over the vines, with here and there a worm. Wherever they went the crop was destroyed. Some few of the vines were out of water during the winter.

Can these worms live where the vines are completely covered with water during the winter?

What is the remedy for them?

Is late flowing sufficient? ADDISON FLINT.

North Reading, Mass., March 14, 1862.

VISIT TO THE GREAT WALL OF CHINA.

Mr. Fonblanque communicates to the London *Times* a graphic description of a visit to the Great Wall of China. The following are extracts:

Accompanied by Mr. Dick, an excellent Chinese scholar, and attached as interpreter to the Commissariat, I left Tien-tsin on the 18th of March, and after a three days' ride through as uninteresting a country as can well be conceived, came in sight of the fine solid wall which encloses the straggling mass of ruin, dirt and decay, called Peking.

Chinese villages are, at best, dreary and squalid looking, but on this route, where the dogs of war have so recently been let loose, there is something harrowing in the misery and desolation of the scene. Has grinding oppression and long suffering deadened the heart of the Chinese peasant to all sense of injury? Or has he, after all, a Christian feeling of forgiveness toward his enemies, for which no orthodox churchman would give the Pagan credit? I cannot explain it, but I own to something like a sense of shame having come over me as we two solitary, unarmed strangers passed through crowds of men, women and children, standing by the charred ruins of their homesteads and among their shattered household gods, without being met by a single angry look or gesture—nay, more, always receiving a ready and friendly reply to every question. Perhaps they felt grateful that we had, at any rate, spared their lives, which is more than they can expect from their countrymen, the rebels, when they pay them a visit.

Some of the villages along our road were mere heaps of rubbish: others retained more or less the semblance of human habitations. In the larger ones, such as Ho-si-woo, which it may be remembered was for some time in occupation of our troops, the late enemy's inscriptions on doors and walls seem to be piously preserved as agreeable relics, and such familiar garrison words as "Officers' Quarters," "Canteen," "Fane's Horse," "Commissariat," "General Hospital," &c., meet one at every turn; though one cannot but remark with regret that the buildings which appear to have afforded shelter to the invaders are sadly devoid of everything in the shape of wood-work, which was

probably used as occasion required for cooking dinners and boiling water. A celebrated and imposing pawnbroker's shop, which was "looted" here, has not yet recovered itself. But let it be borne in mind that in pillage, as in wanton destruction, the Chinese themselves far excel the British or even the French soldier; the bonds of restraint once removed, and a Celestial mob have no patriotic or religious scruples as to the property of Mandarin, priest or peasant—as they fully exemplified at the sacking of Yuen-ming-yuen and the Llama temple, the proceeds of which are to this day openly offered for sale at more or less exorbitant prices in the shops of Tien-tsin.

A FRENCH BISHOP IN CHINESE ATTIRE.

At Ho-si-woo we met a French missionary bishop on his way to Europe, after having passed twenty-five years in China. He was dressed in the native costume, even to the pigtail, and appeared to be treated with great reverence by the unbelieving crowd who flocked in to see the "Mandarin priest." The self-devotion, the zeal, and as a very general rule, the pure and simple lives led by the French missionaries in China, (and their number throughout the empire and the kingdom of Siam exceeds 1500,) are not without their effect upon the people, although this is not displayed by wholesale and indiscriminate conversion to nominal Christianity.

THE GREAT WALL.

Another day's journey brought us to Chataou—a hamlet at the foot of the Great Wall. The road for the last fifteen miles had been so bad that we were obliged to leave our horses at Nankan, hiring in their place Tartar ponies. Nothing less sure-footed than these shaggy, hardy little beasts could have carried us through those rugged mountain paths, which we would have done on foot, but that one mile's march over the sharp rock which forms the pavement would have left us shoeless.

At daybreak on the following morning we climbed the highest peak of the mountain range, and there, standing on the top of the great wall, reflected upon the stupendous folly of this wonderful work of human industry, which is said to have cost the country two hundred thousand lives from sheer physical exhaustion. The wall, which is built of stone and brick, is twenty feet high and fifteen feet broad, surmounted by a double parapet, loopholed on the north side. As far as the eye can follow the mountain range it winds over the ridges of the precipitous black rocks like a gigantic serpent crawling along, and with its breath poisoning all around; for turn where you will, nothing meets the view but the desolate, dreary tract of rock, unrelieved by a blade of grass or a tuft of moss, and huge boulders strewing the base of the mountain sides. It was the whim of a tyrant to build a wall where Nature had already built a barrier far more effectual than anything that human art could construct. However, there it remains, after a lapse of nearly two thousand years—a monument of the cruel folly of one man, and the patient industry and sufferings of many thousands.

Having made an abortive attempt at a sketch, and tried in vain to discover one redeeming feature in this vast scene of desolation, I secured my brick, and descending to the pass, remounted

to proceed homeward. Our guard could hardly believe his senses—certainly he doubted ours. When at Nankan mine host inquired what we were going to the Great Wall for? Our honest answer met with no credit. Were there not walls everywhere? Was not the wall of Pekin much better worth looking at? And then, as for shooting, why come so far for game when it could be bought in the market at our very doors? His impression evidently was that we had some sinister project in view; but when we returned with the brick, the good man simply burst out laughing, and set us down for a couple of harmless maniacs.

For the New England Farmer.

WHEN SHALL WE SOW OUR WHEAT?

MR. EDITOR:—This is a question of great importance, if insects appear again by millions, as they did last year. Wheat sown in the spring is not a very certain crop, it is so liable to be injured by the midge. For two years past, in this vicinity, when wheat has been sown before the middle of April, it has not been injured much by insects, and has yielded from fifteen to twenty bushels per acre. That which has been sown in the month of May, in some cases, has proved an entire failure, and in others, not more than from six to eight bushels per acre have been harvested. The wheat that I sowed the 14th day of April, last spring, yielded at the rate of fifteen bushels per acre. That which I sowed the 25th day of May, yielded only eight bushels per acre. It was a clay soil, favorable to the growth of wheat, and probably would have yielded twenty bushels per acre, if the insects had not injured it. The aphids did some damage, but not so much as the old fashioned midge.

I never saw insects injure late sown wheat so much as they did last year; I speak with reference to that which was sown the last of May. Some of my neighbors had good luck last year, with wheat sown as late as the 12th day of June.

If these facts that I have stated here, ought to guide us any for the year to come, we must sow our spring wheat before the middle of April, if the soil is dry enough, or sow it from the 5th to the 12th of June.

I think the new Black Sea wheat, imported by Messrs. Nourse, Mason & Co., about three years since, is the least liable to be injured by insects; indeed, it has proved itself so in this vicinity.

WHEN SHALL WE PLOW?

This is a question that has been often discussed in your invaluable paper; but I find that there is a great difference in the opinions of farmers. We, I mean the farmers of Addison county, most all agree upon this one thing; that is, that clay land ought to be plowed in the fall, so that the action of the frosts through the winter will pulverize it and fit it for cultivation in the spring, without harrowing over clay nubs as large as washtubs. Fall plowing, also, hastens the decomposition of vegetable matter, and the team performs the labor easier, than it does in the spring. Gravelly or loam stubble land, if plowed in the fall, ought to be plowed again in the spring, for there is no danger of plowing such land too much; the more the better. The more we pulverize the soil, the more

the roots will spread in pursuit of nourishment, and the gases will enter the soil more freely.

By the experiments of the chemists it has been ascertained that at least nine-tenths in bulk of a plant consists of the constituents of the atmosphere, which enter by the roots as well as the leaves. Now if that is so, and we have no reason to doubt it, the more we pulverize the soil, the greater reward we shall get for our labor.

Middlebury, Vt., 1862. OLIVER P. MEAD.

REMARKS.—We are glad our correspondent has called attention to the early sowing of wheat, as no doubt rests upon our mind that many a crop is lost by being sown too late. The rule should be to get it in just as early as the soil is sufficiently dry to be finely pulverized by our common implements. Mr. ELIJAH WOOD, of Concord, said in an article published in the *Monthly Farmer* for October last, "Do not be fearful of sowing the seed too early on account of cold. Get it in as soon as you can possibly work the ground."

For the New England Farmer.

HOW TO GET A LARGE CORN CROP.

I propose to raise a field of corn, and to that effect have turned under eight acres of green sward on interval land, upon which it is said one hundred bushels of shelled corn has been raised per acre in one season. I have hauled twenty cords of muck, of good quality, into my cellar, which has cemented walls, upon which falls the droppings and leakage of seventy head of cattle. I propose to mix the muck with the manure and spread ninety-six cords broadcast, which makes twelve cords on an acre, plow in with a harrow-plow, furrow out and plant on the ridges.

Will I be apt to succeed in raising a large crop of corn, oats and grass with such quantity and quality of manure, if not, wherein shall I change my plan?

A SUBSCRIBER.

East Berkshire, Vt., March 5, 1862.

REMARKS.—Under the treatment you propose to give your land, with a favorable season, you can scarcely fail of securing seventy-five bushels of corn per acre, perhaps more. We see nothing to suggest but to add some quickener to the hill that will give the corn an *early start*, so that it shall be out of the way of September frosts, if they should come. A compost of hen manure or night-soil, or a gill of American guano or Coe's superphosphate of lime, would be likely to accomplish this, if added to each hill, and thoroughly mingled with the soil, over a space of ten or twelve inches.

AMERICAN MECHANICS.—The improvements in farming tools are exciting compliments toward American ingenuity and enterprise throughout the world. One of the best authorities in these matters—the *London Mark Lane Express*—declares that "the Americans have driven our English plow-makers out of the Australian, Indian and other colonial markets, owing to their lighter and cheaper articles."

For the New England Farmer.

WETHERELL'S HORSE HOE.

MR. BROWN:—In compliance with your request, I write you my experience and views in the use of Mr. LORIN WETHERELL'S *Hoeing Machine*. I have used one of his machines the past three years, with the greatest profit and satisfac-

tion, as you would for hoeing with the hand hoe, for the reason that the double plow does not enter the hard soil readily. The rows for this machine should be about three and a half feet apart, and I contend that a man can do better work with this machine in a potato field than he can with a hoe; and a man and horse, under favorable conditions, can hoe eight or ten acres in a day; therefore the machine will pay for itself in two or three days' work, which is more than any other machine that I know of will do.

The price of this machine is twenty-five dollars. It seems a high cost, but compared with its utility, it is the cheapest machine that I ever bought.

It is not easily got out of order, as mine has been in use three years, and loaned more or less every year, (and the first year to all my neighbors,) since which the most of them have bought one, and there has been no expense yet, in repairs.

The other pattern is a single mould-board plow and one gear wheel. It hoes one half of a row at a time; and as I have been informed by those who have used both machines, that the single machine needs no previous preparation of the soil, as the plow is so constructed that it readily enters ordinary soil, and does its own digging and hoeing at the same time. As it hoes but half a row at a time, it is adapted to rows of any width.

In the experience of those that have used them both, (which I have not,) the preference is with the single machine, the cost of which is fifteen dollars.

HORACE WARE.

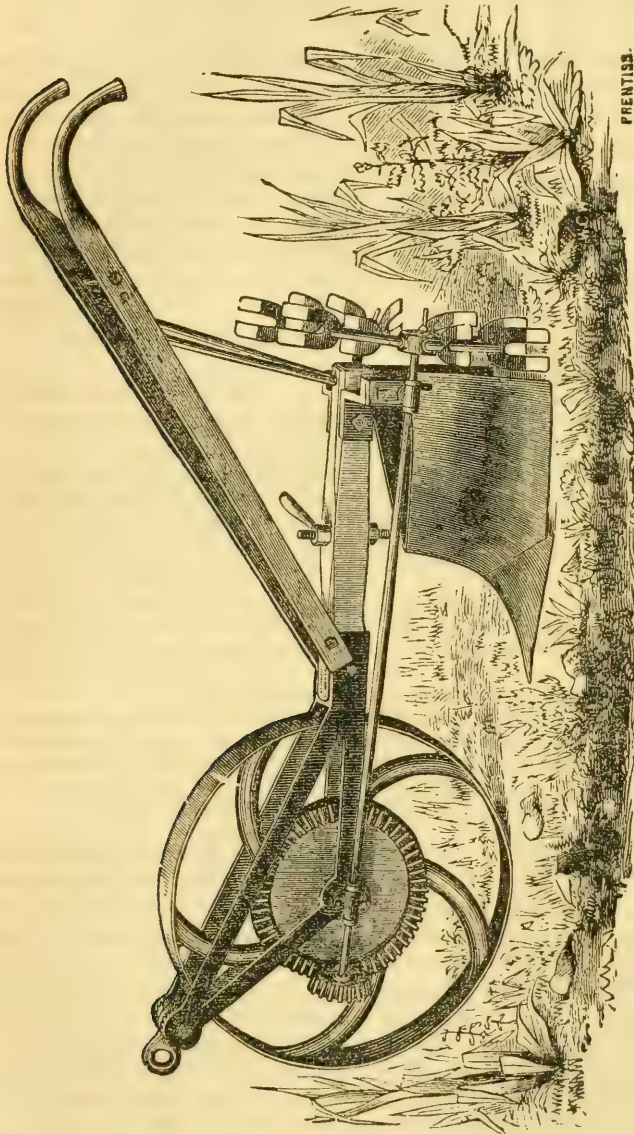
Marblehead, April, 1862.

REMARKS.—In a conversation with Mr. WARE upon the use of labor-saving implements upon the farm, he spoke of the *horse hoe*, of which he has given an account above. We had examined the implement

several times, but had never seen it at work so as to form an opinion of its merits. Mr. Ware's great experience and skill in his profession enables him to judge accurately of the value of any implement used on the farm. Our impression is that he had, last season, some ten acres in carrots, as many more in beets, cabbages and other vegetables, and twelve or fifteen in early potatoes!

Mr. Wetherell, of Worcester, is the inventor and manufacturer of this machine of which he has two patterns. The double machine, as represented in the cut above, has two sets of gear wheels and a double mould-board plow, and does the work on one half of two rows at a time. It

He not only superintends the labor necessary to



carry on these large operations, but takes a leading part in the labor himself, and is, therefore, competent to judge of the value of the tools he uses. While he enjoys the advantages to be found in the use of this *horse hoe*, he desires that his brother farmers may also reap the same themselves.

NEW ENGLAND.

Home of the good, the brave, the wise,
Bold youth and beauty bright,
The sun, as on his course he hies,
Beholds no lovelier sight.
Italia's vales with perfume glow
From every flowery tree,
But ne'er those lovely valleys know
The breath of Liberty.

Bright beams the sun on Syria's plains,
Where ancient prophets trod,
And held, in Nature's forest fanes,
High converse with their God.
But holier are the hills that bind
Thy stormy ocean's shore,
For there the sacred human mind
Knows its own strength once more.

There, in the cottage and the hall,
As bursts the morning ray,
The hymn of praise ascends from all
To Him who gives the day.
There, as the evening sun declines,
They join in harmless glee;
On all the beam of pleasure shines,
For all alike are free.

S. G. BULFINCH.

PUNISHMENT OF CHILDREN.

In the March number of the *Atlantic Monthly* the "Country Parson" has a charming little essay on "The Sorrows of Childhood," in the course of which he makes these remarks:

An extremely wicked way of punishing children is by shutting them up in a dark place. Darkness is naturally fearful to human beings, and the stupid ghost stories of many nurses make it especially fearful to a child. It is a stupid and wicked thing to send a child on an errand in a dark night. I do not remember passing through a greater trial in my youth than once walking three miles alone (it was not going on an errand) in the dark, along a road thickly shaded with trees. I was a little fellow; but I got over the distance in half an hour. Part of the way was along the wall of a churchyard—one of those ghastly, weedy, neglected, accursed looking spots where stupidity has done what it can to add circumstances of disgust and horror to the Christian's long sleep. Nobody ever supposed that this walk was a trial to a boy of twelve years old, so little are the thoughts of children understood. And children are reticent—I am telling now about that dismal walk for the very first time. And in the illness of childhood children sometimes get very close and real views of death. I remember, when I was nine years old, how every evening, when I lay down to sleep, I used for about a year to picture myself lying dead, till I felt as though the coffin were closing round me. I used to read at that period, with a curious feeling of fascination, Blair's poem, "The Grave." But I never dreamed of telling anybody about

these thoughts. I believe that thoughtful children keep most of their thoughts to themselves, and in respect of the things of which they think most, are as profoundly alone as the Ancient Mariner in the Pacific. I have heard of a parent, an important member of a very strait sect of the Pharisees, whose child, when dying, begged to be buried not in a certain foul old hideous churchyard, but in a certain cheerful cemetery. This request the poor little creature made with all the energy of terror and despair. But the strait Pharisee refused the dying request, and pointed out with polemical bitterness to the child that he must be very wicked indeed to care at such a time where he was to be buried, or what might be done with his body after death. How I should enjoy the spectacle of that unnatural, heartless, stupid wretch tarred and feathered! The dying child was caring for a thing about which Shakespeare cared; and it was not in mere human weakness, but "by faith," that "Joseph, when he was a-dying, gave commandment concerning his bones."

FUEL.

It is a common mistake among farmers to burn wood the same year it is cut. Two cords of dry wood will give more heat than three cords in an unseasoned state.

When the moisture in the burning wood is being evaporated, it has the power of taking up heat; its own bulk is increased one-five-hundredth part for every degree of heat added, and it travels up the chimney or stove-pipe with the heat. If wood be cut two years before its use, it will be found much more economical; all the heat will be radiated in the room, or at least a very much larger portion than when it is accompanied by moisture.

When under steam boilers, green wood will not make steam, at least in the boiler, for the heat is used in converting the water of the wood itself into steam; it passes through the flues into the chimney, without heating the boiler.

This is true not only of the wood, but also in degree of coal, especially bituminous coal, which, when wet, radiates but little heat, the majority passing up the chimney. Even anthracite coal is capable of holding some water. It should always be carted on a dry day, and placed under cover for winter's use.—*Working Farmer*.

RHUBARB WINE.—MESSRS. GEORGE SKILTON & SON, of Charlestown, manufacture a wine from rhubarb which we have tasted on two or three occasions, and which we consider an excellent article for those who need its tonic or other influences. We are informed that it is made and preserved without the aid of spirit of any kind. The manufacturers have the certificates of several well-known physicians, who state that they have used this wine with very pleasant results in cases of debility and sickness. It is limpid and clear, light-colored, and has a fine, rich flavor.

Benefit your friends, that they may love you still more dearly; benefit your enemies, that they may become your friends.

LEGISLATIVE AGRICULTURAL SOCIETY.

[REPORTED FOR THE FARMER BY D. W. LOTHROP.]

The twelfth meeting of the series was held at the State House, on Monday evening last, when the subject for discussion was—*The Breed of Horses best adapted to Massachusetts*. Dr. LORING, of Salem, was invited to preside.

The chairman observed that we all understood the value of horses, as they were not only a luxury in civilized life, but a necessity in various departments of labor, particularly so to the farmer. In regard to the best breeds or kinds, it was pretty certain to him, negatively, that the *large*, or the *thorough breeds*, were neither of them the proper and economical kinds for general use in Massachusetts. He had often expressed his objections to large animals, such as cattle, sheep, &c., and he would do the same in respect to horses. One is astonished in looking at large Cleveland Drays, weighing 1500 or 1600 pounds or more; but for ordinary purposes, the Suffolks and Black Hawks, weighing 1000 pounds or less, were superior to them. They were light and elastic, compact in organization, and the kind which Youatt would recommend. They are of the class we need, as they never tire, and can do as much work as the larger ones. So as to the Morgan horses; they are firm, compact, active, good roadsters, and are not surpassed for farming purposes generally. Their strength is proverbial. Dr. L. also spoke of the less expense of feeding these smaller horses, and said that in their construction, too, there were no such horses as we have. For the present war, the horses from Vermont, weighing from 900 to 1000 pounds, are the best, and in fact our finest horses come from that State; and we in New England should congratulate ourselves that we have such a race. These excellent horses are indigenous or native to our soil—not even the Morgan breed has any thorough blood now. The coarse horses of Maine are not so good as those more compact ones from Vermont. For ordinary purposes, he believed, we had a better race of horses than we could import. In fact, some of our Black Hawk mares, worth \$1000 each here, have doubled their price in England.

Of thorough breeds, their mechanism is not so good and hardy as others. They are almost useless in England; they break down, are not fit for roadsters, plowing, &c., and we violate the rules of sound mechanism by their importation and in-breeding. Dr. L. here alluded to the osteological formation of a good trotting horse in regard to the *humerus* and *scapula*, giving him the power to raise his fore legs with ease, grace and agility. The thorough-breeds, on the contrary, are a shuffling, daisy-cutting race, and had been found so in Pennsylvania, Virginia, Kentucky, and some other States. Proof to this effect was cited from

a medical man from one of the above-named States. Herbert once advocated thorough breeds, and he says they are poor on the road, and are not designed as trotters. The speaker said they had not the element or power of trotting well, but the American horse is a trotting horse, and has the proper mechanism for it, also for the farm. On the track it had been said that Patchen was a thorough-breed; and some said Trustee was, for whom it was claimed that he could trot twenty miles in an hour. The old Messenger in Maine was no trotter, hardly making five miles the hour. Flora Temple, however, was unquestionably a Yankee horse, with no thorough blood; and Ethan Allen, Black Hawk and Lady Suffolk, though all great trotters, are equally good for the New England farm. Dr. O. W. Holmes the speaker observed, would as soon breed *dice boxes* as thorough breeds. In a visit to Vermont to see its cattle, Dr. L. said he found a horse at work in a cider-mill. The owner wanted to sell him, and taking a ride together, he went twelve miles an hour easily. He was a mixture of the Morgan and Norman blood, between 700 or 800 in weight, and the speaker bought him, and finds him good on the road for ten miles an hour. Horses like this we cannot find in the other States, or out of New England. Here is the place for the farmer to purchase, and he should not trouble himself about importations, for we have a consolidated stock unsurpassed, if not unequalled.

Mr. WETHERELL said farmers had a deep interest in this subject. On the whole, horse-breeding does not pay. Stonehenge said breeding was like a lottery—it being rare that you got a good animal. Of thorough breeds, if they are not good, how many of the Black Hawks are poor trotters? The best trotters have no Morgan blood in them. As to the term *indigenous*, he did not understand it. [Dr. Loring explained as to their domestic identity.] But neither our horses or cattle are indigenous; they all came from abroad. He did not like the discarding of thorough breeds. What are the best looking and most dignified horses? Look at the Arabian. Some say the horse is from Egypt, or Africa; but he thought he was from Asia. These horses had improved the English, and they were thorough breeds. If the thorough breed is no better than had been stated, then the rules in regard to breeding cattle are set at naught. The Arabian breeds only from his own best stock, and his horses are kept in a pure state. Mr. W. advocated thorough breeds, and was surprised that they should be so taken down. Stonehenge says that 300 thorough-bred stallions had been imported here, and the Morgan and Black Hawk races would have been worthless without their blood. The osteological mechanism is the same for trotting as for racing. Flora Temple and Lady Suf-

folk were no doubt of large thorough blood, and the effect of Morgan on his stock is also proof of this. He spoke of the natural gait of the horse, which was a canter. When a horse is made to trot he goes diagonally, two feet up at once, and then changes. Flora Temple sometimes had no foot on the ground. She earned \$50,000. He gave her pedigree. Good thorough blood was on both sides. [Dr. Loring said Lancet beat her.] Mr. W. replied that horses win that are *made to*. Trustee was three-fourths thorough-blood, and Bob Logic, a thorough-bred stallion, could also trot his 20 miles an hour. Shaw's Balrownie, look at him, how fine! In fact, the thorough-bred horse is to the farmer of the utmost importance. Mr. Alexander, of Kentucky, is trying to raise some for trotters, or for roadsters.

Education has much to do with the horse, as he can be taught to trot, run or amble. Our Puritan forefathers religiously opposed race horses, but learned their own to trot. If the farmer would improve his horses, let him take thorough breeds—breeding from the best, as in cattle.

Dr. LORING inquired of the last speaker, if he didn't understand him to say that "no Morgan or Black Hawk blood was found in a good trotter?"

Mr. WETHERELL admitted that the Morgan can trot pretty well, even good. He said, when up before, that the *best* trotters have no Morgan blood in them.

Dr. LORING wanted to show that we have a roadster that had developed the best stock of horses. He thought we had got ahead of thorough-breeds. We have a farming and travelling horse which is capable of transmitting his formation, and this has been encouraged.

Mr. WETHERELL responded, and observed that he advocated the Morgan, and that these horses were excellent *because of their thorough blood*.

Mr. HOWARD, of the *Boston Cultivator*, said the great question is, "What are the best traits of the horse?" The thorough-breed in England is a runner and nothing else. The term "thorough-breed" is liable to mislead. It was one of convenience. The so-called thorough-breed is much mixed by the Spanish, the Persian, the Arabian and the English stock. "Thorough-breed" is indefinite—a clap-net. Let us look at the mechanism of the English horse. He is not so good as some others. The Morgan is different in conformation from the race horse. If the Morgan is full blood, let it be shown. Will the colts of Mr. Alexander become good trotters by breeding? He owned the Lexington, and no one would change a farm horse for him. Mr. A. was a breeder of horses for the turf; shall we breed from such, or introduce the foreign? Let us see if good trotters can spring from Balrownie. In this matter we should not forget fundamental principles.

Mr. WETHERELL asked if there was any difference in the shoulders of Flora Temple and Lexington.

Mr. HOWARD replied that the *scapula* is not so long in Lexington.

Dr. LORING here gave a description of the *scapula* and *humerus* of the horse, showing the difference between those of the racer and the trotter.

Hon. AMASA WALKER, of North Brookfield, spoke of the effect of climate on men and animals. We have horses fitted to our country and circumstances, yet some foreign stock may be well. Four similar horses placed in different parts of the world would all become different. We have, however, in New England, the best horses known; they are Yankee, like the population. The Morgan horse was a Yankee horse, and his influence on his progeny was marked. He is well adapted to us and our wants.

Mr. N. RICHARDSON, of Winchester, spoke at some length upon the subject, and thought that if foreign blood, or thorough blood, was useful, it was to give greater endurance to our horses. He alluded to many of our fast trotters, and thought that colts should be fed well the first year, and not forced much afterwards. We should be careful, also, not to overdo our horses.

Mr. STEDMAN, of Chicopee, thought that by introducing thorough-breeds we should be much disappointed, and concurred with the chairman. The Morgan was the best for New England, and he believed he had not much thorough blood in him.

Mr. WALKER again alluded to the power of the Morgan horse of transmitting himself. He has a mare which is said to be a *fac simile* of the old Morgan.

The subject for the next discussion was now announced—*How can our Agricultural Exhibitions be made most beneficial to the interests of the Commonwealth?*

HOW THE CHINESE MAKE DWARF TREES.

We have all known from childhood how the Chinese cramp their women's feet, and so manage to make them "keepers at home;" but how they contrive to grow miniature pines and oaks in flower pots for half a century, has always been much of a secret. It is the product chiefly of skilful, long-continued root pruning. They aim, first and last, at the seat of vigorous growth, endeavoring to weaken it as far as may consist with the preservation of life. They begin at the beginning. Taking a young plant (say a seedling or cutting of a cedar,) when only two or three inches high, they cut off its tap-root as soon as it has other rootlets enough to live upon, and re-plant it in a shallow earthen pot or pan. The end of the tap-root is generally made to rest on the bottom of the pan, or on a flat stone within it. Alluvial clay is then

put into the pot, much of it in bits the size of beans, and just enough in kind and quantity to furnish a scanty nourishment in the plant. Water enough is given to keep it in growth, but not enough to excite a vigorous habit. So, likewise, in the application of light and heat.

As the Chinese pride themselves also on the shape of their miniature trees, they use strings, wires and pegs, and various other mechanical contrivances, to promote symmetry of habit, or to fashion their pets into odd fancy figures. Thus by the use of very shallow pots, the growth of the tap-root is out of the question; by the use of poor soil, and little of it, and little water, strong growth is prevented. Then, too, the top and side roots being within easy reach of the gardener, are shortened by the pruning-knife, or seared with his hot iron. So the little tree, finding itself headed on every side, gives up the idea of strong growth, asking only for life, and just growth enough to live and look well. Accordingly, each new set of leaves becomes more and more stunted, the buds and rootlets are diminished in proportion, and at length a balance is established between every part of the tree, making it a dwarf in all respects. In some kinds of trees this end is reached in three or four years; in others, ten or fifteen years are necessary. Such is fancy horticulture among the Celestials.—*Scottish Farmer*.

For the New England Farmer.

QUALITY AND QUANTITY OF SEED.

MR. EDITOR:—This is an important subject, and deserves the attention and careful consideration of every farmer. No one can be a successful farmer who is careless or indifferent about the *quality* or the *quantity* of the seed he uses. The subject is twofold, implying good seed, and a sufficient quantity. On this subject, there is a great diversity of opinion and practice. Some appear to be quite indifferent with regard to the *quality* of their seed, whether it be good, plump, ripe seed of the right kind, or directly the opposite, poor, shrivelled, unripe seed of a worthless character. They do not seem to care what the quality of their seed is, provided it will vegetate, and it does not cost them a high price. Others appear to be quite indifferent with regard to the *quantity* of seed they use, whether too much, or too little. In some instances, they use more than is necessary; and, in others, they do not use seed enough.

With regard to the *quality* of seed, but little need be said to put every one on his guard. It is not always easy to tell good seed from bad; but a discrimination ought always to be made; and bad seed should be rejected, or what, after examination, is thought to be bad. By bad seed I mean seed of doubtful appearance and character—seed wanting in vitality and vegetative power—and seed whose productions are of an inferior quality. All such seed should be carefully rejected; and none but good, bright, plump, perfect seed should be used. Good seed, the very best, is none too good, and is always the most profitable, because the most productive.

They who raise their own seed can easily tell the difference between good and bad seed; and if they continue to use poor seed, or poor kinds of seed, the fault and loss are their own. But they

who purchase their seed at the country seed stores, have no certain means of telling whether the seed be good or bad, or of the right kind, but are obliged to rely on the honesty and fidelity of others; because the seed all comes done up in small papers, less than a table spoonful in each, and is sold at five cents a paper, which, at that price, ought to be good seed, but frequently turns out to be bad. In this case, the individual loss in money is not much, but the loss in labor in preparing and manuring the ground, and in sowing the seed, and the loss in time in waiting for the seed to vegetate, till it is too late to sow again, greatly increase the amount of loss. These remarks apply particularly to garden seeds, and, with certain limitations, to all other kinds of seed. The best, the earliest, the ripest should in every instance be selected; for it is a law in the vegetable, as well as in the animal kingdom, that "like produces like," so that, if we wish to secure the continuation of good crops, we must sow and plant good seed.

But other conditions are necessary to produce good crops beside the use of good seed of the right kind. There must be also a sufficient *quantity* of seed, neither too much, nor too little; and it should be used at the proper time, and in a proper manner. To tell exactly what this quantity is, in every instance, on different kinds of soil, and at different seasons of the year, whether sowed in the autumn or spring, early or late, is no easy matter. It is sufficient to say, that a less quantity of seed is required to sow an acre, when sowed early, than when sowed late, because the seed has more time to vegetate, to take root, to spread over the ground, and to put forth additional shoots. It is believed, that we do not generally sow enough seed of the cereal kinds, such as wheat, rye, oats and barley. We do not sow as much as the English do, and they always have the larger crop. It is very evident, that we do not sow grass seed enough, nor a sufficient variety of seed. This is especially the case on new land that has been recently cleared and burned over. If we do not sow enough seed on such land, the loss is very great; because the condition of the land is such that we cannot plow and sow again, but are obliged to let the land run to waste, on account of the stumps and roots.

The case is somewhat different in planting corn and potatoes, because we generally use too much seed. When we plant a large, but late kind of corn, we almost always use too much seed, and plant too near together; and the consequence is, that, in our climate, the corn does not get ripe before it is overtaken by the frost. The smaller and earlier kinds of corn may be planted nearer together, and with more kernels in a hill. In planting potatoes, we generally use too much seed, whether we plant the great or the small, the cut, or the uncut; and, as a natural consequence, we have a large crop of small vines and of small potatoes. This is especially the case, when we plant small potatoes without cutting, putting two or three in a hill. To obviate the necessity of using too much seed, I usually select the fairest and best potatoes, instead of the largest or smallest, and plant as early as our climate will admit. I cut the potatoes lengthwise, so as to divide the seed end, and put but one piece in a hill, a foot and a half apart. I always plant them with the cut side up, and throw on them a spoonful of ground plas-

ter, to preserve the life and vigor of the potato. The juice or nutriment of the potato is necessary to the support of the young plant. This the plaster absorbs and preserves as it exudes from the cut potatoes. I afterwards throw upon each hill a handful of ashes; and, at the time of hoeing, I throw upon the vines of each hill another spoonful of plaster. And without using any manure, I never fail to have good potatoes, and perfectly free from the rot, when I plant early enough. All the earlier kinds of potatoes escape the rot entirely, because the tops are all dead before the season of the rot arrives.

JOHN GOLDSBURY.

Warwick, Feb., 1862.

For the New England Farmer.

JEFFERSON AT MONTICELLO.

BY JUDGE FRENCH.

A book of 138 octavo pages, with the above title, has just been published, under the authorship of Rev. Mr. PIERSON, President of Cumberland College, Kentucky. His materials, which are said to be entirely new, are derived mainly from Captain Bacon, who was Mr. Jefferson's "overseer" for about twenty years of the latter part of his life. Mr. Bacon's duty as "overseer" seems to have been that of a sort of steward, or general manager, to whom instructions were given as to the conduct of all the affairs of the establishment. We get from the volume an insight into President Jefferson's agricultural tastes and opinions, which we find very interesting. He gave to his farm affairs that minute and systematic attention which is essential to any satisfactory results, and which enabled him to accomplish so much in so many and various departments of business and science. "He always knew," says Mr. Bacon, "everything, in every part of his grounds and garden. He knew the name of every tree, and just where one was dead or missing." He wrote from Washington, while he was President, particular directions how every servant should be employed, and when he sent trees and shrubs, as he often did, to be planted about his place, he wrote instructions where each one should be set.

In a letter of November, 1807, he directs where to plant a great variety of trees. His heart was evidently at his home, and every part of the landscape was pictured in his mind. He writes thus: "*Four purple beeches.* In the clumps which are in the south-west and north-west angles of the house. There were four of those trees planted last spring, two in each clump. They all died, but the places will be known by the remains of the trees, or by the sticks marked No. IV. in the places. I wish those now sent, to be planted in the same places." "*Six Spitzenberg apple trees.* Plant them in the south-east orchard, in any place where apples have been planted and are dead."

The purple beech, let us say, is one of the most

beautiful of trees, and why it is not more common, seeing that 55 years ago it was known and appreciated by Mr. Jefferson, is somewhat strange. We have seen them in England, from one to two feet in diameter, and much of the proportions of the common beech. It has, in localities near Boston, a somewhat peculiar habit of putting out its leaves irregularly, some branches being in full leaf, while others remain in the bud. If the tree is healthful, as we presume it to be, it is worthy of a place in all ornamental grounds.

MONTICELLO.

Capt. Bacon says, "Monticello is quite a high mountain, in the shape of a sugar loaf. A winding road led up to the mansion. On the very top of the mountain, the forest trees were cut down, and ten acres were cleared and levelled off."

The house stood on the very top. The grounds about it were beautifully ornamented with flowers and shrubbery, and laid out in walks. Back of the house was a lawn of two or three acres. The garden was on the hill-side, and full of all sorts of fruits, including grapes and figs. There were about 300 acres inclosed with the house, from which Mr. Jefferson never allowed a tree to be cut for use. Roads and walks were laid out winding through it, where the family amused themselves at pleasure. The whole estate comprised some ten thousand acres of land, too rough and uneven to be very profitable for cultivation, though finely adapted to fruit.

Among other things, he had a flouring-mill four stories high, and built of stone, with four run of stones, to which water was carried in a canal three-fourths of a mile. He had also a nail factory, where he worked ten hands to good profit, at two fires, supplying all the neighborhood with nails. The flouring-mill was unprofitable, but a great accommodation to the country around. He had also a factory for making cotton cloth, in which were three spinning machines, running in all sixty spindles, where he manufactured much more cloth than was used by his family.

Jefferson was enterprising in all directions. When he wanted a new carriage, he set his men to work, and built it on the place, from a model that he planned himself. "The woodwork, blacksmithing and painting were all done by his own workmen. He had the plating done in Richmond." It is a pity the drawings are not preserved, for this carriage must have been a curiosity, or would be now, certainly. "When he travelled in this carriage," says Bacon, "he always had five horses, four in the carriage, and the fifth for Burwell, (a slave,) who always rode behind him. These five horses were Diomedes, Brimmer, Tecumseh, Wellington and Eagle." Mr. Bacon says the new carriage and the fine blood-horses, with elegant

harnesses, made a splendid appearance. His horses were not driven with reins, but a postillion rode one of each pair, as the fashion now is in state carriages abroad.

LIVE STOCK.

Beside indulging, like most Virginia gentlemen, in a taste for fine horses, President Jefferson gave great attention to improvement in the breeds of cattle, sheep and swine. Mr. Bacon says the first full blood Merino sheep in all that country were imported by Mr. Jefferson, for himself and Mr. Madison, while the former was President. They were sent by water to Fredericksburg, but where they came from, we are not informed. Mr. Bacon's plan for getting up a flock would be worthy the genius of a Connecticut Yankee. He put a notice in a newspaper, that persons who wished to improve their stock, might send two ewes, which would be kept until their lambs were ready to wean, and then the owner might come and take one lamb, leaving the ewes and the other lamb. In this way, he says, "We got the greatest lot of sheep—more than we wanted—two or three hundred, I think—and in a few years we had an immense flock. People came long distances to buy our full blood sheep. At first we sold them for fifty dollars, but they soon fell to thirty and twenty, and before I left Mr. Jefferson, Merino sheep were so numerous, that they sold about as cheap as common ones." Mr. Jefferson imported from Barbary four broad tailed sheep; but although they made good mutton, they were not liked, and ran out in a few years.

He and Mr. Madison imported also some swine, called by the name of Calcutta hogs, which Mr. Bacon describes as being black on the head and rump, and white listed round the body. They were very long bodied, with short legs; would live on grazing. He says, "They would not root much more than an ox. With common pasturage, they would weigh 200 at a year old, and fed with corn, and well treated, they would weigh 300 or 400." The object of Mr. Jefferson was to scatter his improved breeds for the benefit of the country; but his "overseer" seems to have wisely judged, that what is lightly won is lightly prized, and he devised a plan by which he increased his herds of swine as well as his flocks of sheep. "I told the people," he says, "to bring three sows, and when they came for them, they might take two and leave one. In this way, we soon got a large number of hogs, and the stock was scattered over that whole country."

Jefferson never imported any cattle during the twenty years included in this account, but "could always procure remarkably fine cattle from Western Virginia." In one of his letters from Washington, he speaks of divers valuables in the way

of plants, &c., sent by his servant Davy, and adds, "He brings a couple of Guinea pigs, which I wish you to take great care of, as I propose to get this kind into the place of those we have now, as I greatly prefer their size and form." The animal now known as the Guinea pig is not of the swine genus, and whether Mr. Jefferson referred to it, or to something else, or was under a misapprehension as to what a Guinea pig is, is not quite certain.

Jefferson was very particular in making his cider. In one of his letters, he speaks of his apples. "They are now mellow and beginning to rot. Let them be made clean, one by one, and all the rotten ones thrown away, or the rot cut out. Nothing else can ensure good cider."

HIS SLAVES.

Mr. Bacon says, "No servants ever had a kinder master than Mr. Jefferson's. He did not like slavery. I have heard him talk a great deal about it. He thought it a bad system. I have heard him prophesy that we should have just such trouble with it, as we are having now." Capt. Bacon is a staunch Union man, utterly opposed to the whole secession movement, and seems to see, as many of us farther North do, the true origin of the rebellion. Some of the necessary fruits of the system of slavery, appear in this narrative. Gov. Thomas M. Randolph, who married one of Jefferson's daughters, was much embarrassed for money, at times, and in order to raise what he required, "when he must have it, and could get it in no other way, he would be obliged to sell some of his negroes." On the 16th of May, 1819, he sold to this same Mr. Bacon a little girl four years old, described as "Edy, daughter of Fennel," for \$200, in order to meet a payment of \$150, to the United States Bank. Mr. Jefferson, while President, sent for Mr. Bacon to come to the White House and take two of his servants, husband and wife, who were quarrelsome, to Alexandria, and sell them, but they begged and promised so hard, that the President relented and kept them. He gave several of his favorite slaves their freedom by his will, and would have freed them all, but was so embarrassed by a loss of \$20,000, as surety for a friend, and by the imposition of everybody upon his hospitality, that he could not well do it. On the whole, we find our favorable impression of Jefferson, as a large-hearted, progressive, considerate, unselfish, kindly natured man, confirmed by this volume. It has nothing to do with his opinions, political or religious, but gives us an agreeable sketch of the philosopher and statesman at home, most beloved and revered by those who knew him best. There is no position where a great man appears more truly noble, than at the head of his family, on his own homestead.

For the New England Farmer.

A CHAPTER ON ROSES.

BY E. W. BUSWELL.

"Then, then, in strange eventful hour,
The Earth produced an infant flower,
Which sprang with blushing tinctures drest,
And wanton'd o'er its parent breast.
The gods beheld this brilliant birth,
And hailed the Rose—the boon of Earth."

This universal favorite has been a theme with the poets of all ages, in all countries, and mythological writers have loved to dwell upon its charms. It was dedicated by the Greeks to Aurora as an emblem of youth, to Venus as an emblem of love and beauty, to Cupid as an emblem of fugacity and danger. By Cupid it was given to Harpocrates, the god of silence, as a bribe, to prevent him from betraying the amours of Venus; and as an emblem of silence, it was sculptured on the ceilings of drinking and feasting rooms as a warning to guests that what was said in moments of conviviality was not to be repeated. Hence the term "*sub rosa*."

One fable of its birth is, that Flora having found the dead body of one of her favorite nymphs, whose beauty was equalled only by her virtue, implored the assistance of all the gods and goddesses to aid her in changing it into a flower which all other flowers should acknowledge to be their queen. Apollo lent the vivifying power of his beams, Bacchus bathed it in nectar, Vertumnus gave it perfume, Pomona fruit, and Flora herself a diadem of flowers.

The Greek poets say that the rose was originally white, and was changed to red by the blood of Venus, who lacerated her feet by its thorns when rushing to the aid of Adonis.

Its fragrance is said to be derived from a cup of nectar thrown over it by Cupid; and its thorns to be the stings of bees with which the arc of his bow was strung. Now, perhaps, some will be so sceptical as to disbelieve this agency of the gods in its origin, yet none will deny that

"The hand that made it is Divine."

The real history of the rose dates back to the time of the earliest writers of antiquity. Herodotus speaks of the double rose, Solomon, of the rose of Sharon, and the plantations of roses at Jericho. Theophrastus of the hundred-leaved roses of Mount Pangæus, and it appears that the Isle of Rhoda (Isle of Roses,) received its name from the culture of roses carried on there. The Romans attained to a high degree of perfection in its cultivation, and in their writings frequent allusion is made to its virtues in such terms as to show that they almost held it in sacred estimation. From the time of the Romans, down to the time when botany became a science, its history is but little known, yet enough to show that through those dark ages it was highly prized by all. Thence to the present time, its history is well defined.

Its great desirableness has led to an almost endless increase of varieties by hybridization, and very considerable works upon its cultivation are current. It is chiefly cultivated as a floriferous shrub wherever grown; yet in Europe, Asia and the north of Africa it not only pleases the senses of sight and smell, but it has become an article of commerce in the various preparations from its flowers, used in medicine and domestic economy.

These are the dried petals, rose-water, vinegar of roses, spirit of roses, honey of roses, conserve of roses, oil of roses, and attar, otto, butter or essence of roses. A description of their mode of preparation would occupy too much space for this article.

Pre-eminently the queen of flowers, it is not excelled by any of the many floral candidates for our favor, and is found in greater or less variety in every well-ordered garden, where, if the selection has been carefully made and the plants properly treated, they will give, even in open culture, a "round of pleasure" from early in June to freezing weather. To secure this end, books or descriptive catalogues should be consulted for the varieties, and as there seems to be a lack of general knowledge on the mode of cultivation, a few practical hints, condensed from "book farming" and "founded on facts," may be of some service to those who have, summer after summer, almost with tears in their eyes, witnessed the blasting of their hopes and roses together.

First, then, come *soil* and *situation*. The rose will grow in almost any common garden soil, but to thrive well, it should have a soil naturally light and free, and well enriched; in an open and airy situation, but little shaded, if at all, and not under the drip of trees.

In planting, many persons think it only necessary to dig a hole and bury the roots; but to secure a good growth, care should be had in pruning *root* and *top*, to leave no mutilated part, and place the roots in their proper positions, leaving no cavity under them, but fill well with fine mould, and press it down lightly.

Of Pruning.—As the rose blossoms on new wood, it is desirable to have that of vigorous growth. Hence it is necessary to cut out freely the weak shoots, and cut back well the stronger ones, so as to induce the lower eyes to push. This applies to dwarf or shrub roses, and not to standards or to climbers. Pillar or trellis roses usually require only the oldest wood cut away, and a judicious heading in. The time for pruning is in early spring, when the sap is beginning to move. If it is desirable to retard the bloom of the perpetual or remontant varieties, it may be done by pinching off the earlier blossom buds.

Insects.—Of the many insects injurious to the rose, are the aphides, commonly called plant lice, or green flies, frequently found in large numbers on the tender shoots and sapping the very life of the plant, and were it not for the aid of the lady-bird, which is said to destroy them in large numbers, and of the small singing birds, the careless gardener might find his bushes soon ruined.

"Reaumur has calculated that in five generations one *aphis rosæ* may be the progenitor of 3,904,900,000 descendants, and in ordinary seasons, ten generations are produced."

Another and more destructive insect is the rose saw-fly, *Selandria Rosæ*, whose young is the rose slug, a small "green monster," a third of an inch in length with a dark stripe through the middle, found lying flat upon the upper surface of the leaf, and eating away the substance, leaves only the veins and lower surface to die and turn brown, thus robbing the plant of its lungs, and giving it the appearance of having been scorched. Their ravages commence with the lower leaves soon after they are formed, and working upward with rapid increase of numbers, they soon destroy the

vitality of the most vigorous plants. Another ugly customer is the rose-bug, *melolontha subspinoso*, a real "hard shell." With his long snout he is a regular bore, pitching into the flower and in a very short time destroying its beauty. Preferring as he does the white flowers, he is often found in a trap. The various spireas, and especially the Siberian, and also the Valeriana phu are favorite resorts of his, and if taken before he is off his perch in the morning (he rises with the sun) he may be treated "hydropathically" with marked success, by simply holding a dish of cold water under him and make an "advance." He at once keels off, expecting no doubt to land anywhere but in water, and being chilled, cannot crawl out and fly away. A few mornings' hunting will very sensibly diminish their numbers. The remedy for the two first named is also hydropathic, but differently administered, and is also a remedy for nearly all the other and minor troubles of the rose. It consists of a solution of whale oil soap, at the rate of one pound to seven gallons of water. This is found to be of sufficient strength to destroy all insect life except hard shells, and will not injure the foliage. The best way is to dissolve it in boiling water, and then dilute to the proper strength, strain it to take out foreign substances and insure thorough solution, and apply with a garden syringe near or after sunset, being careful to thoroughly wet the foliage on both upper and under sides. If applied with sufficient force to knock the enemy off, so much the better. The plants may be syringed with clear water in the morning, but it is not very important. By commencing this process soon after the opening of the leaf buds, and following it up at intervals of four or five days, until the blossoms unfold, a healthy foliage may be maintained, without which no plant can thrive.

To protect from winter-killing, hill up late in the autumn with old manure, and shade with evergreen boughs.

Let no one think these operations too troublesome, but remember that if flowers are worth having, they are worth caring for, and also that if "eternal vigilance is the price of liberty," so it may be of flowers; and as the fond mother feels the strongest attachment to that child whose tender years have caused her the most solicitude, so shall those flowers that require at our hands the most care and watchfulness reward us with a proportionate meed of pleasure. I append a list of a few varieties generally approved:

George the Fourth.
Auguste Mie.
Baronne Provost.
Giant des Battells.
La Reine.
Leon des Combats.
Prince Albert.
Souvenir Levisson Gower.
Plus IX.

Jaques Lafille.
Count Beaumont.
Madam Planter.
Madam Laffay.
Cristata.
FOR CLIMBERS.
Prairie Queen.
Boursault.
Baltimore Belle.

A HUNDRED EGGS FROM A PYTHON.—In the Zoological Gardens at London they have had a large serpent of the Python species, from the West Coast of Africa, for many years. This reptile is nineteen feet long and twenty inches in circumference. About three years ago another snake of the same kind was introduced to its den, and they have lived together ever since. On the morning of the 12th of January the men in charge of that department were much surprised to find that the larger

serpent had laid about a hundred eggs as large as those of a goose. The skin of the eggs was tough and leathery, their color, dirty yellow. When first seen the eggs were in a heap, but the serpent laid them all on a level, and then coiled her body over them. During the week after she laid them, the serpent came off them twice for short periods. She is covered with a blanket while thus upon her eggs, and has not fed for the last twenty-one weeks. This interesting fact establishes the fact that this species of serpent hatches her young by incubation, and it is believed that she will bring some snakes from the great nest of eggs she has laid.

SQUASHES AMONG POTATOES.

It has been generally supposed by farmers that in order to raise good squashes, they must be planted on ground specially prepared for them, and then cultivated with great tenderness and care. A piece of rich land is usually selected, plowed and thoroughly pulverized and manured, and the squash seeds planted in raised hills. In this way they are cultivated in masses, and hold out the most tempting invitation to all the bugs in the neighborhood to come and feed upon them. Under these circumstances the utmost vigilance is necessary to preserve even one plant from destruction,—and those that remain with the breath of life in them, are generally so disfigured and poisoned as to require about half of the growing season to recover from such blighting influences.

Attended with all this labor of the preparation of the soil, and the subsequent care which the squash yard requires, it is rarely the case that squashes do not cost the farmer altogether too much.

There is a cheaper and better way of raising this delicious and wholesome article of food. It may be common to others, but it came to our knowledge through the necessity of finding some more certain way of obtaining a crop than by the "squash yard" process. Several experiments were made, and among them one has resulted in giving us the greatest abundance of excellent squashes, almost without cost.

We plant our field potatoes in hills at a distance of three by three and a half feet apart, and dress these hills or holes, with strawy, unfermented manure. Into these hills we drop occasionally a squash seed with the potato—but these are intended for early use—for the young Marrow or Hubbard squash is as delicious as the true Summer squash. At the first hoeing, seeds are pushed into the potato hills, pretty near the potato plants, where the plants are slightly sheltered while young and tender, and soon begin to stretch away into the open spaces between the rows and hills, and grow with great vigor and luxuriance. All our hilling of the potato is done at the first hoeing. The cultivator is passed through the rows

afterwards, and all weeds kept down, but all this occurs before the squash vines have extended themselves so as to be in the way.

By this mode of cultivating the squash, few plants are injured by bugs, the crop is secured at a most trifling cost, and it has invariably been a good one. The vines should never be so close as to run into each other—not nearer than two or three rods. Those who try this plan will be quite certain to abandon "squash yards," and to have at harvest time as many high-flavored and excellent squashes as they desire. A dozen or two of squash seeds planted in an acre of corn, will be likely to produce similar results—but they should be six or eight rods apart.

EXTRACTS AND REPLIES.

THE BAROMETER.

I wish to make some inquiry about barometers. Are they to be depended on at all times, or do they, like signs in dry weather, sometimes fail? One of my neighbors has Timby's Barometer, (manufactured by John M. Mirick & Co., Worcester, Mass.,) and he speaks highly in praise of it. He thinks it a great help to the farmer, and he informs me he never knew it prove false; often giving him notice of a storm some twenty-four hours ahead.

Now, Mr. Editor, I want your opinion as to whether the barometer is indeed useful to the farmer? If so, I want one—if not, I do not wish to throw away my money. Are there any rules laid down to help one who is unacquainted with the machine? If so, please give them, and you will greatly oblige one, if not many SUBSCRIBERS.

Cornwall, Vt., March, 1862.

REMARKS.—On pages 16, 395 and 518 of the monthly *Farmer* for 1861, may be found articles on the use and value of the barometer; and on pages 159 and 470, of the volume for 1860, other articles containing about all we know of the value and working of the instrument. We have no doubt it may be made valuable to the farmer who will learn to understand it.

A FERTILIZER FOR BEANS.

Will you please inform me in your next year opinion respecting the best fertilizer in the market for white beans? I have about 5 acres of upland connected with a pasture of some 70 acres. It is my intention at some day to bring it into mowing. Being away from my house, and not being able to put on barn-yard manure, I take this liberty to ask your opinion as to what quantity to put in the hill?

The land is quite rich from the droppings of the cattle, as they made a practice of sleeping upon it nights, as it was the most sheltered.

Salem, April, 1862.

B. DRINKWATER.

REMARKS.—We do not know what "the best fertilizer in the market is for beans." We have used American guano and Coe's superphosphate of lime, and had large crops, but the land had been dressed,

broadcast, with barn manure. We have never planted any considerable piece of land, without manuring. The specific fertilizers are used as auxiliaries. On the land you mention, however, should think that, with light plowing and finely pulverizing the surface, you may raise a good crop of beans with the help of either of the fertilizers mentioned above.

HOW TO DESTROY WARTS.

A subscriber wishes information with regard to killing warts on cows' teats. I will give a receipt which is effectual as well as simple: take fresh butter (unsalted) add an equal amount of sharp vinegar; simmer together and apply with a brush, cloth or hand. It will kill them so effectually that they will drop off in a few days! Warts on cattle, however large, may be removed by this process, without injury.

I have tried the above, and seen it tried to my satisfaction. One of my neighbors had a heifer which had a wart on her neck which must have weighed eight or ten pounds tried the above receipt, and in about one week the wart dropped off without the least injury to the heifer. Two or three applications is generally sufficient.

STEVENS LAWRENCE, JR.

St. Albans Bay, Vt., March 24, 1862.

REMARKS.—Excellent, because so simple, and divested of all danger to the animal. Colts are troubled with warts, and the same remedy would probably be equally effective with them. The same application may remove warts on the hands of children or adults. Try it and see.

LEGHORN FOWLS.

In the *Farmer* of March 22, I notice an article written by Mr. H. T. Gates, of New Worcester, in regard to Leghorn fowls. Will Mr. Gates be kind enough to give to the readers of the *Farmer* more information on the subject.

1. In what paper did a man speak highly of a large flock of fowls?

2. Who was the author of the piece he saw in the paper?

3. Who was the gentleman of Worcester city that purchased the six fowls?

Justice demands a reply to the above.

Millville, March, 1862. SUBSCRIBER.

THOROUGH-BRED HORSES.

There is a good deal said in many articles that I read, written on the horse, about thorough-bred or pure blood horses. Will you, or some of your numerous readers, inform me how to breed a thorough-bred horse, or a horse with pure blood?

March, 1862.

J. W.

GARDEN FRUITS.—Strawberries do well on a rich, dry, but deep soil. On banks that are not too poor or dry, they seldom fail to do well, and are often three weeks earlier than when on level soil. The blackberry also will do on a dry, rich bank. We mention this as there are often such spots in small gardens which it is desirable to re-

der useful. *Strawberries seldom do well in low, wet ground.* Raspberries and gooseberries do better there.

In planting raspberries, they should be cut down nearly to the ground when planted. You lose the crop, of course, but you get good strong canes for next year. If you leave the canes long enough to bear, it will probably be the only crop you will ever get from them. *Never expect anything to bear the year after transplanting.* It is generally at the expense of the future health of the tree.

Grapes that have become weak from age may be renewed by layering down a branch some feet just under the surface, and then cut back, so that one good eye only be left at the surface of the soil.

OUR MECHANICAL PRODUCTIVENESS.

The work of preparing the statistics of the last national census for publication has so far progressed, as to afford valuable information to the Committee on Ways and Means, and the Treasury Department, in preparing a tax bill. The different branches of manufacturing industry have expanded marvelously since the census of 1850. In that census the cotton manufacturers were set down at \$65,500,687. The returns from New England alone in 1860 amount to \$79,000,000. The woolen goods of the United States were estimated at \$39,848,557, but New England alone in 1860 returns the value of woolen goods at \$32,000,000. In boots and shoes the census of 1850 for the whole United States returned only \$53,967,408; Massachusetts alone in 1860 estimates her production in this branch of industry at \$46,060,000. Philadelphia returns nearly \$6,000,000. The production of pig, bar, railroad and rolled iron, which in 1850 was of the value of \$30,823,374, in 1860 has reached \$62,055,000, having doubled in ten years. The malt liquors produced in 1850 were valued at \$5,728,508. In 1860 the amount is 3,235,000 barrels, valued at \$18,000,000, or more than three times greater. The spirituous liquors in 1850 were valued at \$15,770,240; in 1860 the production is 86,000,000 gallons, valued at \$23,500,000. The value of the products of industry of all branches in 1850 was computed at \$1,019,106,616. In 1860 it will reach \$1,900,000,000, or an increase of about eighty-seven per cent! The greatest increase since 1850 is in agricultural implements, iron, malt liquors, machinery, clothing, cotton goods, refined sugar, gold mining, &c.

HOW MIST IS GENERATED.

The production of mist is the subject of a note by the veteran Dr. John Davy (brother of Humphrey) in the *Edinburgh Philosophical Journal*. The cause usually assigned for mist is the access of cold air and its admixture with warmer air, saturated, or nearly saturated, with moisture (such as that resting on the surface of large bodies of water,) and strikingly exemplified in our autumnal and winter fogs, when the water, owing to the heat absorbed during summer, is of a higher temperature than the inflowing air. Dr. Davy, however, refers to another cause, not so much noticed, viz., a mild moist air coming in contact with a cooler air, equally humid, resting on cold surfaces, whether of land or water, about the end of winter or beginning of spring. He describes mists which he

considers to have been thus formed in the lake district of Cumberland. To a similar cause, also, he refers the phenomenon termed sweating, which is the precipitation of moisture on walls and flagged floors excluded from the influence of fire. He also attributes to a warm south wind succeeding to a cold north wind, the deposition of a large quantity of moisture in the gallery of a nobleman in Devonshire, and quotes the saying in Homer, "The south wind wraps the mountain top in mist."

LOOK OUT FOR YOUR FRUIT TREES!

We have seen sad havoc among shrubbery and fruit trees, this spring, by mice, and have heard of it from various directions. These little creatures have been cut off from their usual resources in a great degree by the ice which has covered the ground for several weeks past. This has completely shut them out from the low shrubs and grass roots, and in order to preserve life they have been compelled to go to the stems of our cultivated shrubbery and fruit trees. In some cases, we have heard of great damage done to apple trees, where they are of eight or ten years' growth. If such trees are gnawed mostly, or entirely, around their stems, they will be likely to die, unless they receive immediate attention—and the loss and disappointment will be severe. But skilful and patient hands may save many, by attending to them at once.

The first thing to be done is, to visit each tree, and, wherever it is mutilated, cover the wounded part with a cloth or something else, so that it shall not become dry. The bark should be kept fresh and succulent until scions can be cut and placed vertically between the lower and upper portions of the wound; then take scions from any vigorous tree of the same family, and with a sharp knife make a slanting cut of a half inch or more at each end, but on the same side, raise the bark on the edge of the wound a little, and place the scion in so that it will pass under the bark at each end about an eighth to a quarter of an inch. The slanting cut will then rest on the alburnum or sap wood that has been laid bare. The scions should be set within an inch of each other as far as the wood is laid bare, and nearer still would be better. A piece of bass matting, or if that is not at hand, some soft twine or narrow strips of cloth should be tied over the ends of the scions to prevent them from moving, as a trifling misplacement would be likely to prevent their taking. When this has been done, the whole should be covered with a plaster composed of equal parts of cow manure and clay, thoroughly mixed, and this kept from being washed off by rains by a cloth or matting tied over the whole.

This may seem a tedious process, but it will be found to be much more rapidly done than one supposes, until he engages in it. At any rate, if a

tree of eight or ten years' growth can be saved in this way, it is well worth the trouble to do it. Mr. JOHN GORDON, of Brighton, informs us that he has taken this course with some of his fine pear trees that were injured by mice, and with entire success. If they are gnawed quite low down, a banking of earth about the stem after the plaster is applied, may be sufficient.

LEGISLATIVE AGRICULTURAL SOCIETY.

REPORTED FOR THE FARMER BY D. W. LOTHROP.

The thirteenth meeting of the series was held on Monday evening last, at the State House, the subject for discussion being—*How can our Agricultural Exhibitions be made most beneficial to the industrial interests of the Commonwealth?* Mr. FLINT, Secretary of the State Agricultural Board, was appointed to the chair.

He said the question in substance inquired, how we can make our agricultural societies more useful. He had observed that they are inclined to fall into a common routine in conducting their affairs; though when new they were more active, more interest was felt in them, and they did more good. They were doing much good now, however, but not so much as they might. He thought there should be one or two members of the County Societies in each town, whose duty it should be to report to the society any new facts or ideas that might be worthy of its consideration, as affecting its exhibitions. It would excite a wider and more general interest. Heretofore, complaints had been made that persons in the same town had taken certain premiums from year to year, and it was a matter worthy of attention and correction. The publications of the transactions of the County Societies, the chairman thought, should be more general—not merely published in a newspaper, but carefully prepared in a pamphlet form, and distributed among farmers, to an extent, who were not members. Some of the societies had done well in this respect—witness the Essex, the Worcester North, and some others. Mere display and amusement for a day should not be their prime object. The speaker would also throw out as a suggestion that the County Societies should have a fund for the purchase of agricultural implements, to be distributed among its members for trial, as many farmers have not much knowledge of them. They should also own some grounds, he thought, for experiments—the raising of seeds, for instance, as great loss is sustained by those which are worthless. Yet he did not know that it could be satisfactorily done. Another point, was their purchase and keeping of stock. He alluded particularly to the County of Dukes, Martha's Vineyard, of three towns, whose society received \$600 State bounty. If some good South Down bucks were purchased,

giving two or three to a town, the best ewes saved and the grade males castrated, in five years the value of sheep would be increased fifty per cent. So of Ayrshire bulls. In five or ten years the whole stock of the County would be remodelled. The Island of Jersey has so bred from its own stock, and kept it pure. The plan was feasible, he thought, but he presented these ideas, not as authoritative, but merely as suggestive.

Mr. SHELDON, of Wilmington, thought that premiums should be given to the best cattle of mixed herds, and not to those of particular breeds. Unless all cattle were allowed to compete together, he did not see how we could get at a true idea of their worth. More good, he thought, could be done so in five years than in twenty on the usual plan of separation. If crossing is not worth a premium, then we should not cross. He also spoke of premiums for plowing, and thought that the use of four oxen should be encouraged, as they could be trained to work well together.

Dr. LORING, of Salem, thought the County Societies were doing much good, as they occupy the place of agricultural schools. The best knowledge is from the farmers of real practice. They know all about cattle, sheep, horses, fruit, crops, &c., and are the men who constitute our agricultural societies—all of which are educational institutions. They give a stimulus and ambition which reaches the farmers' wives and daughters. Our exhibitions are not mere holiday affairs, but a means of imparting real knowledge. Those countries which have done the most for agriculture have the most important exhibitions. The school at Cirencester, in England, was found too dear for the common farmer, and it was the Royal Agricultural Society which gave the stimulus, and was in fact more important than all the schools of the kingdom. So, of the State Society of New York, and also of ours, with its numerous branches. In our agricultural reports the farmer finds the best literature extant on the subjects treated. The writers do not proceed upon theory, but give figures and facts. He alluded to the broad, fundamental basis of agriculture in the progress of civilization, and passed to consider the State Agricultural Society, which he defended from its aspersers, and said that as it kept watch of the interests of the farmer, it was an organization of which Massachusetts should be proud, and he was glad it had friends enough to keep its course clear.

Mr. WETHERELL alluded to the exhibition of a fine ram by Mr. Watson, of Pittsfield. He placed him under a tree, and invited his neighbors to come and see him. Afterward he exhibited other stock. This was before the formation of the old Massachusetts Society, and was the germ of agricultural exhibitions in this country. In regard to their utility and to their reports, he

thought farmers should be more careful in specifying facts rather than in dealing in general terms, as to manuring, crops, and other matters of farm operations. He made allusion to the State Board of Agriculture, and spoke in its praise.

Mr. HOWARD, of the *Boston Cultivator*, said the exhibitions of Great Britain were very different from ours, as they were not intended as objects of amusement. And ours should be no less so, and more for utility. He spoke of the origin of the old Agricultural Society of Scotland. In 1760, a few gentlemen held meetings in clubs, though under adverse circumstances, when each member was required at the next meeting to produce a plan for its enlargement and encouragement, and that influential association was the result.

Owing to the Legislature holding its session late in the Representatives' Hall, and the necessity of holding the agricultural meeting in a smaller room, and being late in its organization, the discussion was necessarily cut short. Some remarks were made in regard to holding another meeting, but it was finally voted to present the subject of *Underdraining* for another meeting, in case the Legislature should not adjourn, and there was no announcement to the contrary.

CORRECTION.—Mr. WETHERELL in stating objections to steaming feed, did not say that Mr. Peters is "abandoning the practice," as some have inferred from reading the report in the *Farmer* of the 29th ult.

RELATIVE HEAT OF COAL AND COKE.

Independently of this competition, there are a great many well-meaning people in this country, who labor under the impression that inasmuch as coke has already been partly burned, and deprived of its gas, it follows that it cannot produce so intense a heat as coal; but that the reverse of this is the fact has been proved by the best chemists. Dr. Henry, of Edinburgh, informs us that he has "learned that the heat produced by coke, when compared to that produced by coal, is at least three to two." Mr. Winsor, having made experiments with the same view, found that it required three bushels of coal to distil a given quantity of water, and only two bushels of coke. Being rather surprised than satisfied with this, he tried the same substances by combustion, with a certain measure of oxygen gas, but with a similar result. This set the matter at rest in England, so far as the relative heat was concerned; but then it was said that if coke made as hot a fire as coal, or hotter, at least the former was not as wholesome as the latter. This, too, the most learned chemists and physicians pronounced a gross error. Ever since, the demand for coke has been so great in all the large cities of England, that the gas manufacturers cannot produce sufficient gas to supply it. But in this country it is different. In spite of our innumerable free schools and armies of teachers, the old prejudice still prevails against coke;

whereas, in point of fact, it is superior to coal in every property that ought to recommend it for family use, except the rapidity with which it burns. In other words, coal lasts longer than coke; and this is the only sense in which the former can be said to be superior to the latter.

For the New England Farmer.

MILKING.

Milking is the most disagreeable work on the farm; at least so think a large majority of the farmers in this vicinity. Before a person engages work for the season, he is very particular to inquire how many cows are kept? There is nothing, to be sure, very hard about it, but it is a kind of work that any one, however much he may be pleased with it at first, dislikes to do after a little experience.

Your city clerks like very much to come here in the country on vacation, and rusticate, and often the first thing that attracts their attention, is the cows, and they seem to think it must be very nice fun to milk. Upon making the acquaintance of a kicking cow, however, they soon change their tune, and it is not strange if you hear them denouncing, in the most emphatic terms, the whole farming business.

Some of your city people, and I doubt not some country people, too, would laugh at the idea of calling milking cows a *trade*, and yet it comes to very much the same thing, as every one must thoroughly learn the business before he can become a proficient.

We often speak of a person as being a good workman, and this might with just as much propriety, be said of one milking cows. There is as much difference between one person and another in this business as in any other. I have seen boys—yes, and men too—who had not a doubt that they knew as much about their work as anybody, but whom I would not employ under any circumstances, if I could possibly get along without. I am speaking now more particularly of those who might be appropriately termed the wasteful class. It makes a great difference in a cow's "holding out," whether she is "stripped" perfectly dry at each milking, or a little is allowed to be left in the bag. One of my neighbors told me that when he milked his cows himself, they each gave nearly a quart of milk a day more than they gave when he trusted it to his hired man. Great care should be taken to get every drop of milk; strip as long as any milk can be obtained.

Another important item is *neatness*. If people who buy their milk, should sometimes see it before it is strained, I fancy they would not quite as well relish their morning cup of coffee. At this time of year, when cows are mostly kept in the barn, they are very liable to get dirty, and the slovenly milker will be pretty sure to get something in his milk-pail which belongs in the barn-cellar. If a little pains be taken, this can all be avoided. Always keep an old brush or broom in the barn to brush the cows, and have a dish of water to wash their teats, and there will not be much danger of having dirty milk.

Kicking cows are very bad to manage. Not unfrequently the best cows for milk are very fond of exercising their legs while a person is milking,

and in this way a great deal of milk is wasted by the inexperienced milker. A person very naturally springs back when a cow attempts to kick, which is exactly what the cow wishes, for she can then have full liberty of her legs; and before you know it, the cow's foot is in the pail. Instead of springing back, sit up as near the cow as possible, keeping the pail—which should be between the knees—as high as it will bear. In this position, there is some danger of the cow's starting round suddenly, and tipping the milker over, unless the head be braced against the cow, so as to resist any such movement. Some recommend tying a cow's legs when she is fractious, putting a machine in her nose, &c, but this should never be resorted to except in extreme cases. Cross cows will generally become gentle by mild treatment. They will be coaxed, but you cannot drive them much easier than you can men.

Cows should always be milked as rapidly as possible. A slow milker dries them up. This is why a cow milked by a "green hand" gives such a small mess of milk. P. PAIGE.

South Hampton, N. H., April 1, 1862.

For the New England Farmer.

THE ROADSIDES OF THE FARM.

On passing a neighbor's the other day, I was forcibly reminded of the very descriptive words of the wise man in reference to the field of the slothful, and the vineyard of the man devoid of understanding, and of their applicability to most of the roadsides in every neighborhood. They are all grown over with thorns, nettles have covered the face thereof, and the stone wall thereof is broken down. The wise man considered it well; he looked upon it, and received instruction. Can we not do the same?

How many neglect entirely the roadside adjoining their premises, and how many more not only neglect the roadside, but their field side, and fences or walls. In numerous instances, I have seen walls and fences so overgrown with brush, briars, &c., that the owner, for years, probably had not had access to them. On some farms, acres are thus lost, so far as a profitable use is concerned, to their owners. These bushes and briars, unless vigorously combated, will encroach year by year upon the field. The only sure remedy seems to be to commence on the roadside, if the field is thus bounded, and make thorough work of them on both sides. I will ask you, whoever you may be, who have such roadside fences, if it never occurred to you, that every intelligent, observing passer by of your premises would look upon them with sorrow at their neglect, and regard you with pity as being either devoid of understanding, or wanting in good taste. Call to mind some farms we know of in our several neighborhoods, where we invariably see the fence corners piled with brush and briars; wall, if any, overrun with the same, and often broken down. Old carts, cart-wheels, plows and other farm implements, piles of wood, boards, barrels, and sometimes mulch of various kinds, (gathered in other places,) all commingled in the road, within a stone's cast from the front door of the house. Pigs, poultry, and often other farm stock, also allowed the largest liberty of the highway. Does such a state of

things indicate prosperity? Would you not, if going to purchase a farm, pass such an one by, as being unworthy of your inspection? The farm, aside from its slovenly appearance, may be equally as good and productive as its neater neighbor, cultivated under the same circumstances. But who cares to assume the task of clearing up and putting such a place in order, unless it can be purchased very low?

This brings the question to bear where I wished in the outset, viz., that it is the interest of every farmer to keep the roadsides of his farm neat and clean.

Most men are moved by this motive, when all others fail. If you don't care much how things look about your premises, and the roads adjoining, depend upon it, there are dollars and cents involved in the matter that must be heeded, or you suffer loss. If you set to work in good earnest, to clear up the roadside borders of your farm, you will soon extend your operations to other parts, and not rest satisfied until the whole is put in a state of neatness. You will in all probability then discover that a spirit of improvement has somehow got hold of you, and that the farm not only looks better, but pays better. This, however, is not all the good you get. There is an undercurrent of feelings awakened that will gush up into living springs of enjoyment. You will feel your manhood as you never felt it before; new strength for the conflict of life, and greater self-respect; and be held in higher esteem by all who honor you, which will give to your example greater influence, and not only bless the present, but coming generations.

If such a state of things could be brought about, we should hear less of high taxes and hard times. Cheerful contentment would be found on every hand. The wise man passing by, would be pleased with the change, and instead of predicting poverty and want to come as a strong man armed, would regard you as being diligent to know the state of your flocks, and looking well to your herds; the hay and the grass appearing for the sustenance of the same; the lambs for thy clothing, and the products of thy fields and flocks for thy food, for the food of thy household, and for the maintenance of thy maidens. C. K.

Rochester, Mass., Dec., 1861.

For the New England Farmer.

CULTURE OF SWEET POTATOES.

MR. EDITOR:—Why are we, New England farmers, so far behind the times in the cultivation of the sweet potato? I know it is a prevalent opinion with many that it is a difficult task, it being apparently too far removed from its native climate. This opinion, I admit, would hold good against most of the many varieties grown at the South, but I am confident, from experience, that there are varieties that can be grown profitably throughout the New England States. All we want is a variety that will be edible at a very early stage of growth, cooking dry and good, when comparatively immature. A variety called the Nansemond, I think, possesses these merits, and has given good paying crops 44° north. A very short time since it was thought impossible to cultivate the purple egg plant with success, but we now find our cli-

mate and soil well suited for them, and where the egg plant can be grown, there is no doubt of success with the sweet potato.

Our farmers lack only knowledge and experience to enable them to successfully cultivate this valuable Southern crop. The method of growing the sweet potato is rather peculiar to itself; in this climate, the tubers must be sprouted in a hot-bed, and when the sprouts or plants are sufficiently grown, weather and soil suitable, they are separated from the potato, and planted in the field, as the seasons are not long enough to admit of their being grown in the field directly from the potato. Select a warm, southern exposure, of dry, mellow soil, plow a shallow furrow, put old, well decomposed manure in, and throw up a ridge two feet high over it, leaving the ridges three feet apart from the centre of each ridge; transplant the sprouts on the top 12 to 15 inches apart.

I think if our farmers who have suitable lands will but try, they will be amply paid by a profitable crop. I have raised from a later variety than the Nansemond from four to six quarts per hill "of three plants," and from the Nansemond potato I expect a much larger return.

Salem, April, 1862.

JOHN S. IVES.

AGRICULTURE OF MASSACHUSETTS.

Through the polite attention of the Secretary of the *Massachusetts Board of Agriculture*, CHARLES L. FLINT, Esq., we have before us the ninth annual report of the Board, it being for the year 1861.

After saying that "it is gratifying to be able to state that the past year has been one of marked prosperity for the agricultural interests of the Commonwealth," and that "various subjects were assigned to special committees for investigation during the year, with the duty of presenting a report upon each at the regular annual meeting,"—he introduces one from Dr. BARTLETT, from the Middlesex North Society, on the *Diseases of Vegetation*. Among these the writer speaks of a disease which attacks the bean, and "commences with small brown spots upon the pod, near the back of the pod, and spreading thence toward its front. These spots gradually work their way through to the interior of the pod, the brown color changing to black as it progresses. He says all varieties of beans are liable to the attack of this pest, but some are much more susceptible of its influence than others,—the Sieva, Horticultural and Case Knife being most commonly affected among the pole beans. The remainder of the report is principally occupied upon the recent failure of the fruit crop and suggestions upon the modes of managing apple trees.

The next paper is that of Dr. LORING, upon *Cattle, Breeding and Feeding*. This is a long, interesting and valuable report, illustrated by several excellent portraits of neat stock of various breeds. The writer sustains his positions by ex-

tracts from the works of the best authors upon stock, and evinces a deep interest in the topics which he handles so well. Upon the subject of steaming food for cattle, he says he is "satisfied from experience and from the testimony of some of our best practical farmers, that steaming is worthy of careful consideration."

Mr. R. S. FAY made a report on the *Protection of Sheep and Lambs*, from which "it appears that many of the towns have entirely neglected to enforce the 'Dog Law,' while others have been so remiss in their duty as to render it almost inoperative." We hope the Board will institute measures that will compel the authorities in our towns to carry out fully the just and wise provisions of the law.

Mr. GRENNELL, of the Franklin Society, presents a report on the *Wastes of the Farm*, in which he dwells, emphatically, upon the loose, uncertain and unsatisfactory manner in which farming is generally conducted.

Mr. STOCKBRIDGE, from the Hampshire Society, reported upon the subject of *Wheat Culture*. In speaking of the facts which the Committee had collected in the course of its investigations, he says, "they abundantly warrant us in the opinion that wheat can be successfully and profitably cultivated in this State. A little more than a century ago, it was one of the common, ordinary crops. Sufficient was raised for home consumption, and it was an article of export."

The next report is upon the *Cattle Disease*, by Mr. H. H. PETERS, from the Worcester Society. It states that the disease again made its appearance in the town of Quincy, last April, breaking out in two herds nearly simultaneously. Some of these animals were killed, and others were lost sight of.

The Secretary states that constant effort has been made during the past year to enlarge the collection designed to illustrate the natural history and material resources of the Commonwealth. Mr. E. A. SAMUELS, who has made the subject a special study, has an interesting report upon this department.

In the department of *Entomology*, extensive contributions have been made, in addition to the collections made by Mr. FRANCIS G. SANBORN. This gentleman is an occasional contributor to our columns, and is an enthusiast in the profession which he has selected.

Some sixty pages are then occupied by reports from the delegates who attended the exhibitions of the several societies of the State. Then follow extracts from agricultural addresses, essays and reports of committees, which contain many practical suggestions and useful thoughts.

The volume closes with the *Agricultural Statistics of Massachusetts, arranged by Towns and*

Counties. Compiled from the United States Census of 1860, and other official sources, under the direction of the State Board of Agriculture. By GEORGE WINGATE CHASE.

From this report it appears that the average value of the farms in the State, including farm implements, and machinery, and live stock, is \$3,884.58. We intend to allude to these "Statistics" hereafter.

The volume is beautifully printed, and is a credit to the Board of Agriculture and Secretary under whose care it has been produced, and to the State itself.

For the New England Farmer.

APPLE TREES---MICE.

Some valuable suggestions were given in your last issue in relation to the treatment of trees eaten by mice. Hoping to elicit something further from the same source, I make the following statement and inquiries.

I have an orchard of between three and four hundred apple trees, from twelve to fifteen years growth. My method has been to keep about one-third of this orchard under cultivation at a time. On the part laid down to grass, I have always plowed strips by the trees, increasing them in width as the trees increased in size. Until last year I have planted those strips with beans; manuring in the hill; thus making it necessary to stir the soil about the tree with a hoe. Under this treatment the trees have made a steady growth, and for the most part, maintained a healthy appearance. In 1860, this orchard produced one hundred and fifty barrels of No. 1 Baldwins.

My practice does not accord with the theory of Mr. Varney, as given in the last number of the *Farmer*. I am still so much of an old fogey as to believe in plowing orchards. It should be done, however, by a judicious plowman, with great care not to plow too deep anywhere; especially should it be very shoal about the trees. So far as my observation extends, those are the best orchards, and bear the fairest and best fruit, that are kept under cultivation, provided they are plowed with care. Last spring I plowed strips by the trees as usual, but took no crop from them, leaving the furrows just as the plow left them. I state this that others may guard against a similar course. These furrows furnished a most excellent retreat for the mice; and they availed themselves of it to my great annoyance. So soon as I ascertained the mischief they were doing, I went to work with axes and shovels and removed the ice and snow from nearly every tree in the orchard. I found about seventy more or less eaten; many of them not enough to injure them much; others badly, and quite a number large enough to bear from one to two barrels of apples to a tree, entirely girdled to the wood.

When I had cleared away from the trees, I immediately commenced plastering the wounds with a thick coating of cow manure, put on with a trowel. I then carefully bound them up with woollen cloths. The whole operation of excavating and plastering occupied some days, during which time several trees were seriously injured. Indeed, af-

ter we had finished them all completely, so keen was the appetite of these little creatures, that in many instances they gnawed off the strings, and through the woollen cloths and cow manure, making a fresh wound larger than the palm of my hand in a single night; and it was not until I fed them with young sprouts and small limbs sawed from the tree and placed around the trunks, that they stopped their depredations on the tree itself. I have marked those trees that are entirely girdled, and I wish to inquire whether the scions should be put in immediately, or whether I should wait until the bark starts readily from the wood? Can I save, in the way you suggest, such as are eaten quite into the roots? Is a banking of earth or mud placed around the body of the tree in the fall, the easiest, cheapest and best preventive for the future?

J. F. FRENCH.

North Hampton, N. H., April, 1862.

REMARKS.—This is a timely and excellent letter. Let us improve by it. Two acres of our orcharding, where the principal mischief has been done by mice, had been in grass two years, and was broken up last fall. After the plowing had been done, every inch of turf left by the plow was reversed, and nothing left on the surface but the clear soil. But the turning over of the soil formed the most complete harbor for mice, as it is impossible to lay every furrow perfectly flat. We shall break up no more grass land in the orchard in autumn.

We think you have pursued precisely the right course in covering the wounds, as if left uncovered, the sap wood is likely to become dry and crack, and the bark itself will lose some of its vitality near the edges of the wound. When the sap has moved so that the bark may be easily separated from the alburnum, then set the scions.

There is no good reason why you cannot save a tree that is gnawed down to the roots, if the connection is properly made.

A banking of earth or sand will, in ordinary cases, prevent mice gnawing trees; but we know of no sure preventive when the earth is covered with a coating of ice. Could not thousands of these pests be destroyed by feeding to them wheat steeped in strychnine? It might be sowed through the orchard late in November, and occasionally through the winter on the snow.

HINT TO HOUSEKEEPERS.—Every housekeeper who uses kerosene or well oil, knows that it affords the best and cheapest light of all illuminating oils; but she also knows that the constant expense and annoyance from the breakage of lamp chimneys almost, if not quite, counterbalances the advantages of its use. One who has thoroughly tried the experiment of preventing chimneys from cracking with the heat of the flame, says:—Put the glass chimney in lukewarm water, heat to the boiling point, and boil one hour, after which leave it in the water till it cools. The suggestion is worth a trial.—*Scientific American*.

PEAS AMONG POTATOES.

Most persons are fond of green peas; but a great many, even among farmers, do not have half as many as their families would use with advantage to their health and good-nature. They are often planted in the garden, on a rather light and dry soil, and after one or two spring messes have been gathered, the unwelcome intelligence comes to the family, that *there are no more green peas!*

In order to have a succession of this delicious vegetable upon the table, different varieties must be used, and planted at different times, and if the soil is not a moist one, they should be planted deep—say three or four inches—and after they are fairly up an inch or two, mulched with some substance that will check evaporation from the soil directly above them.

For later use there is a better mode than this, viz.,—Put a single pea into the potato hill at the time of planting the latter, over a portion of the field. A week later, go over another portion of the field in the same way, and so on for three or four weeks. In this manner the table may be plentifully supplied with delicious peas as long as they are desired, and at a cost too trifling for consideration.

The potato plant is a protector to the young pea, and when the latter has increased in stature, it still lends its friendly aid by allowing the pea vine to cling to it with its little tendrils, and thus sustains it against storm and wind by its superior vigor and strength.

It is much more pleasant to “pick peas” among the potatoes than when they run up among brush. The objection that it is too far to go to the potato field is not an insuperable one. It is not so much of a trial as it is to go without the peas, especially to those *who are really fond of them!*

For the New England Farmer.

A NOVEL MODE OF PLANTING POTATOES.

DEAR FARMER:—In this remarkable time of our country's trouble, when retrenchment is called for in every possible way, and when much of our laboring population is in the army, it behooves farmers to come in for their share of retrenchment and labor-saving, without reducing the quantity of their products. With this in view I propose to give you the method I adopted in planting potatoes last season, which resulted in complete success.

The ground was a piece of unturned green sward, with a soil of clayey loam. I commenced on one side of the piece and turned a furrow in, then dropped a row of potatoes on the grass close to the edge of the furrow (that was turned over) and turned another furrow against it, completely covering the potatoes, which finished the row. I then turned another furrow, the same as the first, allowing the near horse to go in the last furrow,

dropped potatoes and covered as before, and proceeded in like manner until the piece was done. I planted them in drills, with one piece in a place, and about one foot apart.

When I dug them in the fall, I found the potatoes nestled very cosily among the turf, and they turned out very smooth and nice, and produced a bountiful crop. I think this method a great saving of labor, which in these times is a great item, though the saving of labor was not my only object. The uncommon wet weather of last spring prevented my planting in any other way in the early season.

J. H. M.

Westford, Vt., 1862.

For the New England Farmer.

HIGHWAYS AND THEIR REPAIRS.

[While watching the operations of a new cast-iron plow, with Mr. MEARS, the conversation between us sometimes fell upon topics not immediately connected with the matter before us, and the engravings and description now presented to the reader are the result of one of those conversations. Mr. Mears' name has long been before the public. He has not only invented and made some of the best plows the world ever saw, but he is a cheerful, genial man, full of the spirit of progression, and always earnestly seeking to do something to promote the interest and happiness of his fellow-men. He speaks, below, in his own quaint manner, and presents in it to the reader a vivid picture of what he is doing with his “rough ashler.” Those using this device may give the stone any angle by shortening one of the chains by which it is drawn.]

FRIEND BROWN:—While engaged in the trial of the new cast-iron plow, I said that I would renew the conversation on the subject of road and other repairs, then under consideration. Therefore, I will commence by stating that in the month of November most of our country roads are, or should be, in a good form, well drained, smooth and fair travelling condition, when the frost sets in. They remain thus until the frost comes out, and they are cut up by hoof and wheel, when too soft to support the weight passing over and through them—hence the rut, the ridge, the mud and the standing water in the rut, softening the road-bed and rendering it nearly impassable. As travel cannot be kept off the roads, it is well to thoroughly underdrain with stone at the side, or through the centre, by which the underwater will be prevented from rising to the surface, and the surface water can more readily evaporate and run off, leaving the ruts and the ridges, &c., to harden and dry off.

It is to this state of partial dryness that I would call attention; the material is all here that constituted the good road of November, but it has been put out of place! What a change! How shall it be restored to its former position? Some fill the ruts with small stones which are constantly working to the surface. Some, with hoes, level the ridges into the ruts, to be cut out again by the next heavy team. Others go over the road with

an inverted A-shaped scraper, shod with mill saw plate, and drawn by four to six yoke of oxen with men attendant—its operation partial and apochryphal. Still others have we seen, hauling on and spreading a layer of gravel, two loads abreast, four loads to the rod, at a cost of \$5 per rod; the ruts remaining as troughs below to hold water to aid the heavy teams in cutting them out again the first wet spell.

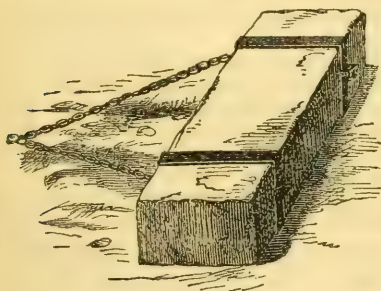
It is easier to pull down than to build up. The thing that is, is that which hath been; and that which shall be, is that that hath already been, and though not new under the sun, I will attempt to describe it.

In the month of April, being desirous of putting the road in order, I applied to a stone-cutter, who split out a rough ashler, 4 ft. 6 in. long, by 18 in. wide and 9 in. deep—cost \$2, weight 900 lbs. The smith then made two bands of tile iron, thus,



with bolts to strap the stone—cost, \$1.

So much for preparation—now for the *modus operandi*, or way to use it. Well! two yoke of oxen on the timbers or forward wheels of a farm wagon, a draft-chain extending from the transom belt of the axle, back to another chain or bridle hooked into the bolts on the stone, the right arm shortest, to bring the stone at an angle of 45° with the axle and line of ruts. Gee, Buck! Gee, Bright, up! One man to drive, one to tend the stone, one to throw out and remove loose stones, and away we go over the gee ruts to the end of our route! Whoa, boys, whoa! Well! Let's see. The ridges are broken down—the ruts filled up and consolidated by the weight of the stone.



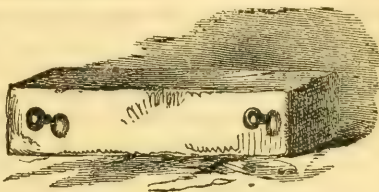
The cobble stones and loose earth are thrown to the centre to fill up the single horse foot path (which had been guttered out) and be removed! Hush, Bright! Haw, Broad, over! And away we go! On the back track of the other ruts—in like manner and effect to the starting-point. Now let us put the 'sider on—for we can look back—not having "put our hands to the plow." The face of the road looks as smooth and even as ever. It is solid, too. The trough is filled up and the stones are out of the way. Well, what is the cost? Three men at \$1.50 per day=\$4.50—two yoke of oxen at \$1.50=\$3.00, amounting to \$7.00. Four miles per day is 320 rods \times 4=1280 rods; \$7.00

or 7000 mills \div 1280= $5\frac{1}{2}$ mills, or $\frac{1}{2}$ cent per rod. "Time is money! Gather up the fragments, that nothing be lost! Go thou and do likewise, and let others follow your example, and oblige the old Plowmaker

JOHN MEARS.

South Abington, 1862.

P. S. Repeated trials with the stone render it advisable to give more weight, which may best be done by having it split out 12 inches instead of 9. Also, to dispense with the bars and draw by ring bolts inserted in the face sides, about 9 inches from the ends, thus:



the wear of the bar is avoided, the draft is not so heavy, and the movement of the stone is more direct and steady. When about to be carried to a distant place, roll it on to a log or cobble stone and sling under the pole and axle.

J. M.

SORREL.

This is one of the most troublesome pests, wherever it has once become thoroughly rooted in the soil, with which the husbandman can be annoyed. On clayey soil, however, it soon disappears; but on land of an opposite conformation and texture, its eradication is attended with much difficulty, and, indeed, can only be effected by the most assiduous and persevering efforts. The presence of sorrel in a soil is regarded—but with how much truth we do not know—as an indication of acid, and hence the use of lime, or ashes, is said to be of service in effecting its extermination. By cutting sorrel for several consecutive seasons, just before the seed ripens, or a little earlier, say at the period of general flowering, and applying annually a liberal top-dressing of caustic lime, the growth of the plant will be arrested, and perhaps overcome. This, however, is deemed too expensive by most farmers.

The seed of sorrel is of a nature to remain for many years inhumed in the soil without germinating, unless the conditions essential to its development exist about it. The pericarp, or outer integument, is so indurated that the nicest balance of the stimulating powers of nature are requisite to secure germination, and hence we find old pasture lands, that have not been disturbed for generations, and upon which no sorrel has been seen in the memory of man, will, upon being plowed and exposed to atmospheric influences, become filled with sorrel plants. The same characteristics apply equally to mullein and a variety of other seeds, but perhaps to none in a more remarkable

degree than to sorrel. Where it has taken complete possession of the ground, by mowing it early, before any of the seed has matured, and making it in a grass-cock, with as little exposure as possible to the sun, it furnishes a very good hay for horses and sheep; and in this way it should be appropriated, whenever such a crop is unfortunately produced.

For the New England Farmer.

THE FARMER'S KITCHEN GARDEN.

No part of the farm pays as well as the kitchen garden, if well taken care of. I do not mean by this that every farmer can make money by raising vegetables for market, because that is impracticable, but it is a self-evident fact that the farmer must procure the support of his family from his farm, and a well conducted garden will produce more towards this than any other part of the farm of five times the extent.

The use of vegetables and fruit as a diet is said by medical men to be conducive to health, and as most people, and especially children, are fond of garden fruits, it is policy for every farmer to provide a plentiful supply for home consumption. It would seem that people having all the conveniences that farmers have, as regards land and plenty of leisure time to take care of a garden, would be the ones that would consume the most of such things; but it is a fact that the people of cities and villages use more vegetables than the same number of land-owners. Take a look among the farmers, and you find that one-half of them have no garden at all, or at most, a little corner in the grain field which is overrun with weeds, and as soon as the grain is harvested the cattle are often turned in to destroy what there is! Others have a place set apart for the purpose, but do not get time to do anything in it until all the spring farm work is done, thereby making it too late to secure any of the kinds requiring early planting, and destroying the possibility of getting early vegetables. This is a great loss, when we take into consideration that such things are relished a great deal more in the hot weather of June and July, than later in the summer. What is more aggravating than to know that your neighbor has green peas, new potatoes, string beans, and the like, and your own but just up, and all through your own neglect by not planting in season!

Let me say a few words in behalf of the farmers' wives and daughters, who, during the first two or three months of summer, have to rack their brains to think of something to get for dinner, which the men can eat,—for when they come in from the field, weary with labor, their stomachs are apt to revolt at salt pork and old potatoes! But if there are early potatoes, peas, beans, and other vegetables in the garden, they know just what to get for dinner, and when the workmen come in, they eat with a relish, and nothing does the faithful wife more good than to see her husband eat the victuals she has cooked for him, as if they tasted good.

The garden should be near the house, as house-keepers do not always have time to go far; and if it is close by, a great many leisure moments can be spent in weeding, &c., which could not be

done if it were far from the house. The best soil for a garden is either a muck or sandy loam, but as we can not always have the right kind suitably convenient, we must make what we do have, as nearly right as possible. If it be too moist, draining must be resorted to, and such land generally makes good gardens. In fact, the best garden I ever saw was a marsh, thoroughly drained, and well manured to warm it up. The manure for the garden should be well rotted, and if allowed to remain in a vault or cellar through the summer, all seeds would be killed, thus saving a vast amount of work in weeding. Apply the manure in the fall, and plow in immediately, plowing again in the spring, which thoroughly incorporates it with the soil. As soon as the weather will permit, plant some early potatoes, peas, and all kinds of early vegetables, which are not liable to be killed by frost, putting in others along as the season will permit, and when they come up, keep them well hoed and free from weeds, and you will have the satisfaction of having something good, as well as your neighbor. At another time I will, if desirable, give specific directions for raising various garden vegetables.

W. H.

New York, March, 1862.

EXTRACTS AND REPLIES.

A ROOT CUTTER—CARROT WEEDER—MANGOLDS AND CARROTS—HORSE WITH A COUGH—POOR FARM, AND NO MONEY OR STOCK.

1. A friend of mine is very desirous of obtaining a root cutter. If you know of any, please say what kind, and whether they will cut large turnips fit for sheep; that is, cut them small enough?

2. Do you know of any tool to cultivate and weed carrots by horse power?

3. Do you know upon any reliable data the relative value of an acre of carrots and the same of mangold wurtzels, and their value for feeding sheep and other stock?

4. Do you know any remedy for a horse which has a severe cough?

5. What would you recommend a man to do who has got a run-down farm, who has no money and very little stock? A few remarks on the subject may be of great value to a poor farmer. Perhaps his Excellency, Gov. Holbrook, would give a little advice on this subject.

JOHN H. CONSTANTINE.

Campton Village, N. H., 1862.

REMARKS.—*Willard's Patent Root Cutter*, figured and explained in the monthly *Farmer* for January, 1859, is just the article you need. It cuts the roots in strips about as long and as wide as a man's forefingers, but not more than a *quarter of an inch thick*. And this strip is broken partly through, several times, so that sheep or lambs have no difficulty in eating them. One bushel of turnips a *minute* may be cut with one. Price \$10. Sold by Parker, Gannett & Osgood, Blackstone Street, Boston.

2. We know of no implement precisely adapted to the cultivation of carrots by horse power. *Mann's Vegetable Weeder* might be used with horse, but man power would be better, we think.

3. We do not.

4. "*Horse with a cough.*" But little work, a warm stall, with bedding a foot deep, moderate feeding, with moist cut feed, and a little laxative medicine.

5. "*Poor farm—no money—no stock.*" A hard case, truly—almost too desperate for any remedy that we can prescribe. There are three ways to be pursued, viz.:

1. To sell land enough from the farm to furnish the means of plowing and manuring one, two or more acres. Plant and tend them perfectly, working for others in the meantime to assist in the family support until the crop is taken off.

2. To get the means of operating by mortgaging the farm, then cultivate thoroughly and economically, and not only make a living, but pay up interest and principal.

3. With the aid of the family, cultivate a kitchen garden, pasture a cow or two, and let the rest of the farm lie idle, while you assist other people on the best terms you can, until enough is accumulated to purchase stock, and keep it.

We know persons who are now independent, who began in each of these ways. Those who mortgage the farm and get a cash capital of four or five hundred dollars to work upon—if they are shrewd calculators—will generally do the best. Our sympathies are warmly with you, brother C., and we regret that we cannot recommend something more easy to accomplish than anything we have suggested.

RECEIPTS FOR MAKING COFFEE.

The following receipts for substitutes for pure coffee, which the writer has never seen in print, are worthy of a place in the Ladies' Department of the monthly *Farmer*.

1. Take sweet corn, sound and well ripened, roast and grind it as you would coffee, mix two-thirds of the corn with one-third of good quality pure coffee.

2. Take common barley, wash and free it from all foul seeds, roast, pound or grind it. Mix two parts barley, two parts sweet corn, and one part pure coffee.

In either of the above ways a finely flavored article is produced, superior in the estimation of the writer to the best quality of ground coffee that is usually sold in the market. The addition of a small quantity of prepared Dandelion root or Chicory is esteemed by many an improvement, imparting to it a higher color and richness of flavor.

SUBSCRIBER TO MONTHLY FARMER.

Still River, March 26, 1862.

SMITH'S PATENT FENCE.

In your issue of Feb. 22, is a description and recommendation of "Smith's improved farm fences, patented Oct. 11, 1859."

From some experience, and also from observation, I can bear testimony to the excellence of that kind of fence. Fences were built in this vicinity on essentially the same plan, several years

previous to the date of this patent. Mr. Smith, therefore, cannot claim to be the inventor of anything in reference to it, unless it be the grooving of the posts. Hence, I suppose any one desiring to erect such fence, by dispensing with the grooves in the posts, need not be at the trouble and expense of obtaining permission of Mr. Smith.

South Amherst, 1862.

FARMER.

REMARKS.—We know nothing of this matter. Mr. Smith will be able to vindicate his own rights.

REMEDY FOR SHEEP PULLING WOOL.

I have always regarded the column of "Extracts and Replies" as a very valuable feature of your excellent paper, it seems so familiar and so much like talking the matter over with our neighbors. And I sometimes think that we get and retain more valuable knowledge by these inquiries and short replies than by a more extended and labored essay upon some general topic.

A few weeks since I noticed an article from Mr. Peters, of Bradford, recommending unguentum as a remedy for sheep pulling their wool. I find that this was designed for those cases where sheep pulled their own wool, occasioned probably by itching. I have one or two sheep that pull the wool from others, and eat it, and have sprinkled snuff on the sheep, which I hope will prevent it for a while, but I am afraid that it will not last long. It would be something of a task, and somewhat expensive to apply snuff to a large flock.

Will you, or some of your readers, tell me of something better? S.

Fairlee, Vt., April, 1862.

REMARKS.—We have no knowledge in the matter. Will some one who has, reply?

USE OF ASHES.

As the time for composting and using manure will soon be upon us, I wish to ask through your columns a little advice in using ashes. I have a stoned cellar with a roof over it, partly in a side hill, in which I deposit my ashes as taken from the house, where they cannot expose buildings to fire, and are ready for use when required. I deposit there annually about 100 bushels. These ashes are made from a mixture of wood and peat. I wish to ask which is the most judicious method of using them? I have for years past used them by applying a handful to each hill of corn on the surface of the ground, around the stalks at the first hoeing. But I have serious doubts of its being the best way, either for the present crop or for the land. I thought you or your correspondents might give their practice, whether they use as above described, or compost and put in the hill at time of planting, or how they use, and on what soils they are most beneficial. I thought this inquiry might bring out views which would interest others as well as myself.

A SUBSCRIBER.

Wayland, 1862.

REMARKS.—Many good farmers think ashes applied to the hill as you describe, is a profitable way to use them. We are inclined to think that if they were composted with fine, meadow muck, and a quart of the compost applied to the hill, and mixed with the soil, the effect would be better.

USE OF HEN MANURE—WARTS—WHEAT FOR HORSES.

I have some hen manure. Can you inform me of the best way of applying it to the ground, and to what crop? If to corn, how should it be prepared?

A neighbor of mine has a steer on one of whose ears is a number of large warts, one being as big as a hen's egg. Can you suggest a remedy?

I lately saw it stated in a book entitled "Cole's Diseases of Animals," that wheat fed to horses would poison them. Now that does not seem reasonable to me. What is your experience in the matter?

J. DANA ADAMS.

Williamsburg, Me., 1862.

REMARKS.—Mix the hen manure with muck, loam or sand, four parts of either to one of the manure. Before dropping corn throw a handful of this compost into the hill, and mingle it well with the soil.

See article in this paper on dispersing warts with fresh butter.

Wheat taken in large quantities, will kill a horse—so will corn. But fed judiciously, either is nutritious and wholesome.

DISSOLVING BONES.

Can you, or some of your correspondents, inform me through the columns of the *Farmer* the shortest and cheapest method of dissolving, pulverizing or grinding bones, or the best and cheapest way in which they can be used on land here in Vermont?

I have a small farm on which my slaughter-house stands and from it I have a great many bones. Now I would like to know how they can be used most advantageously with the least expense. The land is, a part of it, light, sandy soil, and part a sort of mucky or sandy loam. I have some young fruit trees, set out last spring. Can I make these bones useful about the trees? Is Coe's superphosphate of lime anything but bone dissolved and ground? What will a machine for grinding cost? Will some one experienced in bones write on the subject?

A SUBSCRIBER.

Burlington, Vt., 1862.

REMARKS.—In our last volume of the monthly *Farmer*, on pages 121, 145 and 401, may be found articles on this subject. In the number for January of this year, page 23, is a mode of reducing bones by placing them on a layer of ashes, in a cask, and so continue them. Coe's superphosphate of lime is nothing but bones and sulphuric acid.

A GOOD BARN HOE.

Some one has asked for a hoe to clean out cattle stalls, one that will clean out the corners as well as the manure. Being a blacksmith, and liking convenient tools to work with, I have made several for my neighbors, that give good satisfaction. For the benefit of some of your numerous readers who may like one, I give you the plan. Take a steel shovel blade, one that is worn out or broken will answer, cut off a piece six inches wide,

leaving it the whole width of the shovel, and have both edges straight; punch a half inch hole one and one-fourth inches from the edge on the thickest side; draw a shank six inches long and head in a tool. Bend the shank so as to have it stand like a common hoe, put it through the hole and rivet on the blade with four rivets. A good ash handle is the best. Both sides can be used.

Concord, April, 1862.

F. E. B.

BEST CHURN.

I wish you would inform me which kind of churn is best for a dairy of four or five cows. The Air Pressure Churn was recommended as making ten per cent. more butter than any other in the market. Does it sustain its reputation? Will you inform me where one can be obtained, and at what price?

THOMAS HASKELL.

West Gloucester, 1862.

REMARKS.—We have been constantly using the Air Pressure Churn, summer and winter, for two years, and never have found any other churn equal to it. Sold by Parker, Gannett & Osgood, Blackstone Street, Boston.

A GREAT CROP OF RYE.

I saw in your paper of the 15th ult. a notice of a great rye crop, which I think I can beat. This gentleman raised 70 bushels from 3 bushels seed, on 1½ acres of ground.

I had 2 acres of ground, and sowed 4 bushels of seed, and cleared up 112 bushels of rye, as clean as any I ever saw.

A SUBSCRIBER.

Bridport, Vt., April, 1862.

GOATS.

I noticed in the *Farmer* something about goats. Do you, or any of your readers, know where one can be bought? If so, please let me know through the *Farmer*, and what one can be bought for.

Great Falls, N. H., 1862.

S. F. A.

REMARKS.—We do not know where a goat can be purchased.

RINGBONE.

If "Young Farmer" will inform me of his name and residence, I think I can tell him what will cure ringbone.

SAMUEL H. WHEELER.

Mason Centre, N. H., 1862.

A PLOWING BEE.

At a recent meeting of the *Concord Farmer's Club*, it was voted to have a *Plowing Bee* in that town at some time during the first half of May. The desire is to bring together as many plow-makers, and plowmen, as may find it convenient to attend, and to test the plows, so as to learn which of them will do the best and most work, with the expenditure of the least amount of power. Another object is to bring farmers together in a social way, and, perhaps, to hold a discussion upon the subject of *plows and plowing*.

The members of the Club will receive those who come from other towns as guests, and extend to

them such attentions and hospitality as will make their visit agreeable.

Notice of the time and place of the trial will be hereafter given by a committee appointed to superintend the business of the occasion. The plan seems to us to be a good one, and cannot fail to establish some important questions which are now unsettled. We hope to see persons at the trial from various sections of the State.

For the New England Farmer.

SAVE YOUR TREES!

FRIEND BROWN:—I see by the papers that great damage has been done the past winter to fruit trees by the mice; now, if taken in season, the most of these can be saved. Take a sucker from the same, or any other tree of the same kind, and flatten the ends on one side, and insert one end under the bark above, and the other below, where the bark is eaten off, the same as in side grafting, that will make a bridge to carry the sap over the wounded part; bind the ends tight with a strong string, then cover with grafting wax or clay; now cover the whole with earth, if near enough the ground; if not, bind up with clay, to protect the wounded part from the sun. It is a good plan to put in a number of these suckers, to be sure of one or two, and if they all live, so much the better. When these have grown sufficiently strong to support the tree the old body can be cut out if desired, and the others will soon close up. If this is carefully done every tree can be saved. I have some trees that were done in this way a number of years ago; one of which, whose bark was eaten off clean for four feet, two years ago bore four barrels of apples.

ANDREW WELLINGTON.

Winchester, April, 1862.

REMARKS.—Our correspondent is a gentleman of experience in orcharding, and we are glad he confirms the remarks we made last week upon this subject. Since writing that article, we find that the destruction to fruit trees in this State is much more extensive than we then supposed. Scarcely a young orchard has escaped. We find *fifty* trees on our own grounds, many of them *six inches* in diameter, girdled entirely. Others have a strip of bark left an inch in width, or two or three, in some cases. All these trees were visited late last fall, and every spear of grass taken away from them. The ground where most of them stand was plowed last fall, but the plow was followed with the spade, and every inch of the grass left by the plow was turned under by the spade.

We suggest,—in addition to what has been said,—that the scion to be inserted should have a scarf on the upper side two-thirds as long as that on the lower side. Let the upper side run under the bark until it reaches the end of the scarf. Another suggestion is, that scions be used, not "*suckers*."

For the New England Farmer.

TIME FOR PRUNING.

MR. EDITOR:—In noticing some remarks of yours, and of your correspondent "W.," in the last *Farmer*, I will venture to give some reasons why I consider June pruning preferable to spring—say March or April. It is generally supposed that after the leaves are off in the fall, trees remain idle until they leave out in the spring. It seems to me that is not the case, especially when the ground is not frozen, and it seldom freezes to such a depth that the extreme ends of the roots are not at work in accumulating sap for the next season's operations, and by March or April, if the tree is in healthy condition, the body is full. Now the tree needs the whole of this supply to throw out its next crop of leaves and blossoms, and if a limb is cut off in the spring, some part of the sap will be pretty sure to escape, and thereby injure the tree.

In making the leaves and blossoms, and setting the fruit, this extra supply seems to be exhausted, and the next operation is the making a growth of wood; now prune your trees, and the fruit and growth together with the leaves, will take care of the sap. Still, sometimes, a diseased tree will leak; when that is the case, it is a sure indication of trouble somewhere.

The foregoing, I contend, is the true economy and process of nature in the growth of trees, and to my mind is a good reason why trees to be transplanted should be taken up in the fall and put in cellars, or heeled in, rather than stand in the nursery until April or May, when they are nearly ready to leaf out. The check they receive in transplanting, at such a period, is hardly overcome through the whole season, and the growth is hardly perceptible, if any.

What kind of progress would a nursery man make in digging trees in this country, at this time, when the snow is from 3 to 6 feet deep? Still, there is no frost in the ground, and nature is steadily performing her silent work.

Another good reason why trees should be taken up in the fall and put in the cellar, is, they are safe from being winter-killed, at least for one season.

I suppose pruning is, or ought to be done, in reference to *the tree*, instead of the surrounding crops, and there is a *best time* to do it, as there is a best time to hoe corn or dig potatoes, and the man who insists in hoeing his corn after haying, or digging his potatoes after Thanksgiving, would be considered out of order, to say the least, and any excuse, such as leisure, convenience, or crops, is no offset to the damage that may be done by doing it at the wrong time.

WM. B. HAZELTON.

South Strafford, Vt., April 7, 1862.

REMARKS.—Please write on the subject you speak of in a private note.

DEPTH OF QUIET PEOPLE.—Some men dawn upon you like the Alps. They impress you vaguely at first, just as do the hundred faces you meet in your daily walks. They come across your horizon like floating clouds, and you have to watch a while before you see that they are mountains.

Some men remind you of quiet lakes, places such as you have often happened upon, where the green turf and the field-flower hang over you and are reflected out of the water all day long. Some day or other, you carelessly drop a line into the clear depths, close by the side of the daisies and daffodils, and it goes down, down, down. You lean over and sound deeper, but your line doesn't bring up. What a deep spot that is! you think, and you try another. The reflected daisies seem to smile at you out of the water, the turf looks as green as ever, but there is no shallow spot beneath. You never thought it, but your quiet lake is all around unfathomable. You are none the less impressed from the fact that it is a quiet lake.—*Williams' Quarterly*.

For the New England Farmer.

BAD EFFECTS OF LEAD PIPE.

MR. EDITOR:—Although much has been said and written relative to the poisonous effects of lead pipe, yet I doubt if the majority who are using water conveyed through this material are aware of its injurious effects upon the human system. I have known of repeated instances where members of families have suffered from various ailments, who have only found relief in abstaining from the use of water conveyed through lead. A striking case of this kind was recently made known in this vicinity.

The wife and one or two other members of a family were diseased in a manner that baffled the skill of the medical faculty, far and near—nothing that was done seemed to afford any permanent relief; and, in fact, relief was finally despaired of, but little hopes being entertained of their recovery. At last, however, it was suggested to them that the lead pipe through which the water used by the family was conducted, might be the cause of their ailments. The suggestion was heeded; pure water adopted in its stead, and the result was the most surprising. But a few weeks elapsed before a sensible change was manifest in all, and in a few months a complete restoration was effected. And from observation, I have no doubt that many are ignorantly suffering from similar causes. But among those who have given thought to the matter, lead for aqueducts is fast going into disuse. Guttapercha, block-tin, hydraulic cement, &c., all of which are free from the objections urged against lead, are taking the place of it. The use of hydraulic cement for aqueducts is fast taking the place of everything else in many localities, and especially where it has been the most used. It seems to possess essential qualities possessed by no other material, prominent among which is its well known *purity* and *durability*—time only serving to harden and render it more durable—two desirable qualities in an aqueduct; then, again, the expense is but little more than half as much as lead, and it is, beyond question, the cheapest and most durable pipe that can be laid. Several of my neighbors have had some of it laid after the manner of Livermore's patent, and it seems to be all that could be desired. It is taking the place of everything else in this vicinity. Block tin, too, makes a durable as well as pure pipe, but its high cost is objectionable to the man of limited means. I hold it to be the duty of every one who is putting down an aqueduct, to

hesitate long before using a material, the poisonous qualities of which will in any manner jeopardize the health of his family.

REFORMER.

Winchester, April 3, 1862.

HOW TO PROPAGATE CURRANTS.

In order to raise currant bushes from cuttings so that they may have a clean stem and but one set of roots, and those at the lower end, like seedlings, I take a cutting about ten inches long, and prepare it in the usual way, by cutting off the lower end square. I then cut out the buds or eyes, excepting the three or four uppermost ones, which are reserved to make the top. I then stretch a line, start the cuttings by its side, eight inches apart in the row, their ends one inch in the ground, and mould them up four or five inches in depth, like corn hills when planted in drills. When they become well established by having roots, which will be in mid-summer, level the mould of earth back to its former place. Should any roots have started from the intended stem, clean them off and plant them out at one year old.

The advantage of growing bushes in the above manner is that they will not send up suckers as those do that have been grown by setting the cuttings deep in the ground, and allowing two or more sets of roots to grow.—*Country Gentleman*.

HAY AND CORN SHRINKAGE BY DRYING.—The loss upon hay weighed July 20, when cured enough to put in the barn, and again February 20, has been ascertained to be 27½ per cent. So that hay at \$15 a ton in the field is equal to \$20 and upward when weighed from the mow in winter. The weight of cobs in a bushel of corn in November ascertained to be 19 lbs., was only 7½ lbs. in May. The cost of grinding a bushel of dry cobs, counting, handling, hauling and miller's charge, is about one cent a pound. Is the meal worth the money?—*Scientific American*.

LADIES' DEPARTMENT.

SORROWS OF CHILDHOOD.

There are parents who deliberately lay themselves out to torment their children. There are two classes of parents who are the most inexorably cruel and malignant: it is hard to say which class excels, but it is certain that both classes exceed all ordinary mortals. One is the utterly blackguard—the parents about whom there is no good nor pretence of good. The other is the wrong-headedly conscientious and religious; probably, after all, there is greater rancor and malice about these last than about any other. These act upon a system of unnatural repression, and systematized weeding out of all enjoyment from life. These are the people whose very crowning act of hatred and malice towards any one is to pray for him, or to threaten to pray for him. These are the people who, if their children complain of their bare and joyless life, say that such complaints indicate a wicked heart, or Satanic possession; and have recourse to further persecution to bring about a happier frame of mind. Yes, the wrong-headed and wrong-hearted religionist is probably

the very worst type of man or woman on whom the sun looks down. And, O! how sad to think of the fashion in which stupid, conceited, malicious blockheads set up their own worst passions as the fruits of the working of the blessed Spirit, and caricature, to the lasting injury of many a young heart, the pure and kindly religion of the Blessed Redeemer! These are the folk who inflict systematic and ingenious torment on their children; and, unhappily, a very contemptible parent can inflict much suffering on a sensitive child.

You may find parents who, having started from a humble origin, have attained to wealth, and who, instead of being glad to think that their children are better off than they themselves were, exhibit a diabolical jealousy of their children. You will find such wretched beings insisting that their children shall go through needless trials and mortifications, because they themselves went through the like. Why, I do not hesitate to say that one of the thoughts which would most powerfully lead a worthy man to value material prosperity would be the thought that his boys would have a fairer and happier start in life than he had, and would be saved the many difficulties on which he still looks back with pain. You will find parents, especially parents of the pharisaical and wrong-headed religious class, who seem to hold it a sacred duty to make the little things unhappy; who systematically endeavor to render life as bare, ugly and wretched a thing as possible; who never praise their children when they do right, but punish them with great severity when they do wrong; who seem to hate to see their children lively or cheerful in their presence; who thoroughly repel all sympathy or confidence on the part of their children, and then mention as a proof that their children are possessed by the devil, that their children always like to get away from them; who rejoice to cut off any little enjoyment—rigidly carrying into practice the fundamental principle of their creed, which undoubtedly is, that "nobody should ever please himself, neither should anybody ever please anybody else, because in either case he is sure to displease God." No doubt, Mr. Buckle, in his second volume, caricatured and misrepresented the religion of Scotland as a country; but he did not in the least degree caricature or misrepresent the religion of some people in Scotland. The great doctrine underlying all other doctrines, is, that God is spitefully angry to see his creatures happy—and of course the practical lesson follows, that they are following the best example, when they are spitefully angry to see their children happy.

Then a great trouble, always pressing heavily on many a little mind is, that it is overtaken with lessons. You still see here and there idiotic parents striving to make infant phenomena of their children, and recording with much pride how their children could read and write at an unnaturally early age. Such parents are fools; not necessarily malicious fools, but fools beyond question. The great use to which the first six or seven years of life should be given is the laying the foundation of a healthful constitution in body and mind; and the instilling of the first principles of duty and religion which do not need to be taught out of any books. Even if you do not permanently injure the young brain and mind by prematurely overtasking them—even if you do not permanently

blight the bodily health and break the mind's cheerful spring, you gain nothing. Your child at fourteen years old is not a bit farther advanced in his education than a child who began his years after him; and the entire result of your stupid driving has been to overcloud some days which should have been the happiest of his life.

I believe that real depression of spirits, usually the sad heritage of after years, is often felt in very early youth. It sometimes comes of the child's belief that he must be very bad, because he is so frequently told that he is so. It sometimes comes of the child's fears, early felt, as to what is to become of him. His parents, possibly, with the good sense and kind feeling which distinguish various parents, have taken pains to drive it into the child, that if his father should die, he will certainly starve, and may very probably have to become a wandering beggar. And these sayings have sunk deep into his little heart. I remember how a friend told me that his constant wonder, when he was twelve or thirteen years old, was this: If life was such a burden already, and so miserable to look back upon, how could he ever bear it when he had grown older?—*The Country Parson*.

RECIPT FOR LIGHT DUMPLINGS.—After making up your bread the second time, take off a sufficient quantity for dumplings, and set it away until about an hour before dinner, then make them up in rolls as you would biscuit; sprinkle a little flour over your pie-board, and put them on it, far enough apart to allow for raising. Have ready a boiler with sufficient boiling water to steam them, place the steamer over it and put in some of the dumplings, so as not to touch each other, (see that the lid is placed on tightly,) and let them remain ten minutes; then remove them and put in others. Send them to table hot, to be eaten with cream and sugar, or butter and molasses.—*House-keeper*.

FRENCH PANCAKES.—Take six eggs, separate the yolks from the whites; beat the whites on a dinner plate to a snow; beat four yolks with two tablespoonfulls of sugar, two of flour, and a tea-cupfull of cream; add a little salt and a very little carbonate of soda; put in the whites of the eggs and mix gently. Put one ounce of butter in a frying-pan; when hot, pour in the whole pancake. Hold the pan a good distance from the fire for fifteen minutes; hold before the fire to brown on the top. Dish on a napkin. Put any kind of preserved fruit over it. Serve hot.

UNMARRIED WOMEN.—I speculate much on the existence of unmarried and never-to-be-married women, now-a-days; and I have already got to the point of considering that there is no more respectable character on this earth than an unmarried woman, who makes her way through life quietly, perseveringly, without support of husband or brother; and having attained the age of forty-five or upwards, retains in her possession a well regulated mind, a disposition to enjoy simple pleasures, and fortitude to support inevitable pains, sympathy with the sufferings of others, and willingness to relieve want as far as her means extend.—*Charlotte Bronte*.

LEG OF MUTTON ROASTED.

A leg of mutton intended for roasting should be kept longer than for boiling; it should be carefully attended to during the time it is hung up, constantly wiped to prevent any mustiness gathering on the top and below the flap, and in hot weather lightly dusted with flour or pepper to keep off the flies. The kernel in the fat on the thick part of the leg should be taken out by the butcher, for it taints first there; and the bloody part of the neck should also be cut off when first brought in.

Remove the thick skin very carefully; trim off the piece of flank that adheres to the fat, and flatten the fat with a cutlet-beater or chopper; cut off the knuckle, and nick the cramp bone, to allow it to become more plump, as in haunch. Put a little salt and water into the dripping-pan to baste the meat at first; but then use only its own gravy. Serve with jelly.

A leg of mutton is usually roasted whole, but can be divided advantageously for a small family. Cut the knuckle into a good sized joint, and boil it until tender; but put a coarse paste over the lower part of the thick end to keep in the gravy, and roast it; or if the skin be raised gently from the outside of the leg, to about six or seven inches wide, two or three good slices may be cut off for steaks, and the skin then fastened down with ckeepers.—*Cook Book.*

STEAMED BROWN BREAD.—Take two quarts of sweet skim milk, one tablespoonful of saleratus, one of salt, half a cup of molasses, put in equal quantities of rye and Indian meal until the dough is as stiff as can be conveniently stirred with a spoon, then put it into two two-quart tins. Place sticks across the bottom of the kettle to keep the water from the bread; place one of the tins on these, and the other in a tin steamer on the top of the same kettle, and let it steam three hours. The water should be kept boiling, while the bread is cooking. When done, put it in a warm oven long enough to dry the top of it, not bake it. Yeast can be used instead of saleratus, if any prefer it, but the bread must rise well before putting it in the kettle.

CLEANING DISH COVERS.—Dish covers should always be wiped and polished as soon as they are removed from the table. If this is done while they are warm, it will be but little trouble; but if the steam is allowed to dry on them, you will find much difficulty in getting the tarnish off from the insides. When they are wiped and polished, hang them up in their places immediately.

THE CATTLE MARKETS FOR APRIL.

The following is a summary of the reports for the four weeks ending April 17, 1862:

NUMBER AT MARKET.

	Cattle.	Sheep.	Shotes.	Live Fat Hogs.
March 27.....	1237	1773	1600	None.
April 2.....	1281	3454	2200	500.
April 10.....	1021	1939	2000	150
April 17.....	1235	3338	2500	600
Total.....	4774	10,504	8300	1250

PRICES.

	Mar. 27.	Ap'l 2.	Ap'l 10.	Ap'l 17.
Beef cattle, @ lb.....	5 @7c	5 @7	5 @7	5 @7
Sheep, wool on, live weight.....	4½ @5½	4½ @5½	4½ @5½	4½ @5½
Sheep, clipped, live weight.....	3½	3½ @3½	3½ @3½	3½ @3½
Swine, stores, wholesale.....	3½ @6	3½ @5½	3½ @5½	3½ @5
" " retail.....	4½ @7	4 @7	5 @6½	4½ @6
Dressed hogs.....	5 @5½	5 @6	5½ @6	5½ @6

REMARKS.—It will be noticed that for these four weeks no change is made in the range of prices for beef. The market, to be sure, has been very steady, but not quite so uniform as this might seem to indicate. In the weekly *Farmer* a full column is given to details, by which it will be seen that quality affects the market as well as price, and that the bulk of the sales are sometimes up and sometimes down in the scale of prices, without exceeding either the highest or the lowest figures.


QUARTERLY SUMMARY.

The total number of cattle, sheep, shotes and live fat hogs reported for the first quarter, or the thirteen weeks ending Thursday, March 27th, 1862, with the average number for each week, is as follows:

	Whole No. for 13 weeks.	Average No. per week.
Cattle.....	16,157	1243
Sheep.....	34,961	2689
Shotes.....	6,515	601
Live fat hogs.....	8,350	680

Of the 16,157 cattle at market during the last quarter, 9118 were from the Western States, leaving 7039 as the number from the New England States and northern New York. Of the 34,961 sheep above reported for the quarter, 14,423 were from the West, and 20,538 from New England and the northern part of New York.

It has been found so difficult to decide upon the number of cattle that should be reported as "stores," that no attempt is made at classification. Many oxen, steers and heifers are sold either for beef or for stores, as will best suit customers. During this quarter, there has been a great demand for light beef, and probably considerable less than 100 head @ week have escaped the "meat-axe" of the butcher.

 In one respect the recent floods in California have had a beneficial effect, to wit, they have developed new mines, and in many instances formed new deposits in the gulches and river beds, long since worked out and abandoned. The San Francisco *Bulletin* thinks the total damage caused by the floods will not exceed three and a quarter millions of dollars.



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OFFICE...100 WASHINGTON STREET.

SIMON BROWN EDITOR.
HENRY F. FRENCH, ASSOCIATE EDITOR.

THOUGHTS SUGGESTED BY JUNE.



JUNE, in the climate of New England, is in many respects the most pleasant month of the year, and, better than any other, realizes the "balmy sweets," the "ethereal mildness," and the universal activity and gladness of nature, which foreign writers have represented as characteristic of May.

The mornings are no longer frosty. The north-east winds have lost their chill. The air is balmy, but not as yet sultry. The forests and fields now wear their best dress—the freshest and brightest of the year. The grass, which has "come creeping, creeping," everywhere, spreading as a carpet over pasture and meadow, at once for food and repose to the "cattle upon a thousand hills," is now sweeter and softer than at any other time during the season. In a word, New England is in her glory, and to be seen to advantage, must be seen in June—early in a June morning.

The various shades of verdure, the profusion of flowers, the melody of bird, and insect song, are richer in June than during any other month of the year.

But some farmer, whose eye has followed our words thus far, may be thinking, if he does not say: "All this is fine enough for those who have plenty of money to spend in hunting out landscapes, and plenty of time to stop and admire them, but to farmers whose backs ache and whose limbs are stiff by attempting more work than they ought to do, and which they do not feel able to

pay others for doing, the weeds in our fields, whose rank growth outstrips our strength, catches our eyes and blurs the beauty of the scene."

JUNE brings to farmers long days and hard work—so long and so hard that whatever of poetry there may have been in us at first, is soon sweated out, and passes off in "invisible exhalation." We know that most of the farmers of New England necessarily work hard. But we do not believe that it is necessary for them so to overtask the body as to incapacitate the mind for the enjoyments of the beauties of nature. True it is, that they have no slaves "to fan them while they sleep, or tremble when they wake," but how many servants have they obedient to their call, how many even of the very elements minister to their gratification and tend to promote their comfort and happiness.

Let us, borrowing something of the coloring of another, figure to ourselves an inhabitant of some peculiarly favored spot, with all the powers of nature contributing to his enjoyment and pleasure,—the clear, blue sky above his head, shaded occasionally by clouds which drop down fatness in fertilizing showers;—the green earth beneath his feet throwing from her bountiful lap a profusion of flowers in every form of loveliness; around him venerable trees, full of leafy honors, stretching wide their branches to afford him a grateful shelter from the meridian heat, or bearing fruit to gratify his taste; hard by, the sparkling of a cool, transparent stream, as it hastens to join the broad river, flowing majestically through meadows of emerald to lose itself in the distant ocean;—in his groves, birds of note cheer him with their sweet music;—on his lawns the lowing of cattle, on his hills the bleating of sheep;—in his stables beasts of draft to cultivate his fields, and of burden to convey him swiftly and at ease on distant journeys; in his store-houses, ingenious machines and implements, which, like "things of life," perform in the most expeditious and satisfactory manner

some of his most laborious and irksome tasks;—in his dwelling are necessary comforts and conveniences, with many of the luxuries which commerce has collected from distant climes and ingenuity has prepared for his use;—in his family a beloved partner of his bosom and dutiful children, who kindle while they reflect the glance of a parent's eye, and to whose steps all paths to usefulness and distinction are wide open.

Such is the farmer of New England! He is more than all this. He is a man in authority—a part of the government whose jurisdiction he acknowledges, and whose power he is ready to enforce with all the energy which has been acquired by the fixed habit of doing his own work and making his own laws.

For the New England Farmer.

A TROT ON THE ICE.

A trot came off on the 14th April inst., on the ice, between black mare Fanny Barrett, of this town, and bay mare Green Mountain Queen, of Bridport, Vermont. The town of Crown Point is situated on Lake Champlain, on the New York side, and Bridport on the Vermont side. The trot was on Lake Champlain, between the two places. There was a large number of people upon the ice to witness this trot, attracted there not so much to look upon the speed of these two beautiful "nags,"—but the idea of a trot upon the ice, on the 14th day of April, excited the curiosity, and for that reason, much interest was taken. The mares made a good race, but the result became a disputed point, and was finally left unsettled. Years will roll away, before the people in this vicinity will witness a scene so novel and rare, as a horse trot upon the ice on Lake Champlain on the 14th of April.

The snow has been in this vicinity from 3 to 4½ feet deep, but now, before the genial rays of old Sol, the snow is fast wasting away, and the roar of the brook mingling with the shrill note of the bluebird, says, all hail once again, happy spring.

W. W. MOORE.

Crown Point, N. Y., April 17, 1862.

OLD TIMES AND NEW.—Compare travelling as it is now with what it was when the apostles went out. I could go around the earth and come home again quicker than Paul could go from Jerusalem to Rome in his day. In the time that was required to write one Bible in his day, I can print a million now. It cost a fortune to own a book then; now there is not a pauper in the poor-house that is not able to own a book. Literally, knowledge may be said to be without money and without price; when for a penny a man may have a newspaper that covers the contemporaneous news of the globe, so that he can see more than if he were put on an exceeding high mountain—with a devil at his elbow at that, to tempt him withal. Books are cheaper than bread, and none are so poor that they cannot have the reading of the events of every single day. —H. W. Beecher.

BARLEY.

This valuable grain is now much cultivated in many sections of our State, and is used, not unfrequently, as a substitute for corn and wheat. The constituents of barley—taking the grain and haulm together—have, on burning, 7.04 per cent. of ashes, while the straw and grain of oats leave but 5.73 per cent. The analysis of these ashes demonstrates the position of barley, and places it in the category of silicious plants. The same remark applies, also, with equal correctness to oats—the ashes of the latter furnishing 62 per cent. of silica, and 25 per cent. of lime salts; the ashes of barley 25 per cent. of lime salts, and 55 of silica. We mention these grains in connection, because some have affected to believe that *oats* require an aliment essentially different from that demanded by other cereal grains.

Oats flourish on *any* good corn land, but barley requires a sandy, or even gravelly loam; a soil that is light and warm. Very fine barley is now brought from California, and may be purchased for 65 or 70 cents per bushel. This is probably taken as ballast, or in preference to returning with empty bottoms.

Barley has risen in the estimation of farmers, and is now cultivated more freely than it has been for many years.

THE BEST GATE.

In the *Farmer* of February 15th, an article on fencing of barn-yards, etc., says: "The best gate is made of *scantling* and boards;" to which I say as the Irishman did of his friend's dinner, which was meat and potatoes; "that it was just his, barrin' the meat." So this gate is just mine, barrin' the scantling. Formerly I used scantling, two by three, and two by four inches, for the frame of my gates; but one time, now some twelve years since, I had no scantling, and therefore built my gate, which was ten feet long, frame with strips of board, one by four inches for the latch end, and one by eight inches for the hinge end of the gate; brace, one by six inches. My lower board, one by eight inches; next above, one by six inches; next two, each one by four inches; the whole secured by wrought nails clinched, and hung with strap hinges. This gate is now, and has been all the time from its construction, in daily use, and has never sagged an inch. From that time to the present, I have always built my gates without scantling, and have found them equally as good barriers as those built with scantling, while they are lighter, cost less, and do not sag. Any one can build such a gate and hang it—the posts being set—in two hours.—*Cor. Ohio Farmer.*

WON'T GROW.—Mr. Goodale, Secretary of the Maine Board of Agriculture, in the recent discussions of the Board, stated that there is a tract of land in Maine both south and north of which Indian corn could be grown, but upon which it would not grow.

For the New England Farmer.

POTATO REMINISCENCES.

MESSRS. EDITORS:—Notwithstanding the prejudice of Cobbet, potatoes, if not a luxury, are considered by most people as an indispensable article of food. I believe, by general consent, they are considered the king of roots, and that it could have no substitute to make its place good upon the table. Since my remembrance, a great many varieties have succeeded each other, losing their popularity as better varieties made their appearance. Like men, and many other things, they have their day, and are forgotten. In the latter part of the last century, very few potatoes, comparatively, were used; aged people at that time preferred turnips to potatoes. A visitor at my father's was asked, at dinner, if he would be helped to a potato? He said, "No, I thank you, we have enough of them at home." One of the first varieties, I recollect, made a *strong* impression upon my mind, as well as my stomach; by some means or other, it was introduced extensively in this State, and it was cultivated in the State of Maine in large crops as late as 1808. This variety was called the Spanish potato, and what quality it had to commend it, unless its prolific propensity, is beyond my feeble comprehension. I got humbugged by planting potatoes of that variety. They were so strong that they were unfit for the table, and I believe animals ate them out of a sense of duty, rather than love. The man that fed my cattle with them, said that they produced a drooling and discharge of tears from their eyes, if I am correct.

Improved varieties soon followed. The English White—an excellent potato, but soon run out—had its day like a politician, and was gone. Then the purple varieties, the Orange potato, Long John, or Long Red, and numerous other varieties followed in succession, and among the rest a potato of formidable dimensions, called the "Negro potato," was introduced. The Rohans, Jenny Linds and "Contrabands" would rank well together, as a coarse, unpalatable vegetable production, unfit for human food, where better varieties can be obtained. The Chenango came into notice here more than thirty years ago, an excellent variety; it had its day, like all sublunary things; old age and the rot has nearly exterminated it from this neighborhood, and so of the Long Red. The Riley potato was a fine-flavored, mealy potato; but two or three objections were sufficient to hurt its character, viz., its sunken eyes, smallness of size, running like beads upon its roots, and its liability to rot. The Danvers Red, a fine looking potato, but, like other potatoes that are yellow inside, are hard and heavy when boiled.

I have been experimenting upon the different varieties of potatoes for the last few years, planting only those least liable to rot. I repeatedly lost my crops while trusting to the Chenangoes, Long Reds and several other kinds, by almost a total rot. The last few years I have planted the Davis seedlings, the Cracker or Jackson, and a kind resembling the old Kidney potato, I believe by some called the St. Helena. The Davis seedlings have grown a good size, very fair, handsome potatoes; a few of them have rotted. The Crackers are early to ripen, and of the finest grain, and best mealy potatoes I have seen. They require rich land, to get large ones. Their fault is sunk-

en eyes and an unequal surface. I have planted the Kidneys six or seven years past. They grow upon almost any kind of soil to a good size, are fair, and easy to peel; they are excellent potatoes, although not so mealy as the Crackers. For the number of years I have raised them, I have not lost a half-bushel by the rot in that variety; they held out sound when Chenangoes and Long Reds nearly all rotted in the same field. I have told some of my experiences at potato raising. I can well remember the progress of potato agriculture for the last seventy years; they were much more easily raised then, than of later years. We do not get more than one-half or a third so many to the acre, as we did from fifty to seventy years ago. I think, by a careful selection, the quality may have been improved, but they have fallen off in quantity more than they have gained in quality since that time. Potatoes are the most important of our root crops, they rank number one as a vegetable for culinary purposes; they are cultivated at less expense than many other roots, and they are among the best roots for cattle and swine, when they can be afforded.

SILAS BROWN.

North Wilmington, March, 1862.

For the New England Farmer.

ANCIENT AND MODERN LUXURIES.

MR. EDITOR:—We often descant upon the progress we are making in agriculture during the present century. We are apt to imagine that, in olden times, men had but few luxuries. Especially is this true when we listen to the story of the pioneers of our own country. But it so happens that a certain man lived well nigh three thousand years ago by the name of Homer. He was a person on whom as much wise nonsense and as much real learning have been displayed, and yet of whom as little is really known as of any other man. This much, however, we can say of him: that he had a way of his own in describing matters in his day.

Now this man gives us a description of the palace and garden of Alcinous, King of the Phæacians, which equals any in modern times. Perhaps your Hon. M. P. Wilder may show a greater variety of pears. Aside from this, we must give the palm to Alcinous, unless the contrary can be shown.

After describing his palace made of brazen walls, his doors of gold, the posts as well as the beam over the door of silver, with images of gold and silver, dogs wrought by Vulcan as guards to his threshold, and so made as to be imperishable, he then gives us an insight of its interior, with its couches around the walls supplied with well wrought coverings, the handiwork of women. On these reclined the nobles, who enjoyed a perpetual feast in its halls. Golden candlesticks wrought in the form of fair youths, stood above the altars to give light to the guests. Fifty female servants are employed; some to grind the apple-red colored wheat, and others to spin and weave a cloth so close that oil running down will not penetrate it. The poet even boasts that as the Phæacians excel other nations in guiding the ship over the stormy sea, so do their women excel all others in weaving. Next comes the description of his garden.

Outside the hall, and near the gates, is a large garden of four acres. Around it on all sides is a

hedge. Within are the tall green trees. The pear, the pomegranate and apple trees, with their choicest fruit, the sweet figs and blooming olives, are here. The trees abound in fruit at all seasons of the year, in summer as well as in winter. The gently blowing west wind causes some to be growing, and others to be ripening at the same time. Pear ripens after pear in succession; apple after apple; grape after grape; and fig after fig.

In one part of the garden is the vineyard, situated on a level spot, which is accessible to the rays of the sun, and filled with fruits. They are now gathering some of the grapes, while they are treading out others. Some of the vines are still in flower; the grapes on others are unripe, while others are dark colored, ready for the harvest.

In another place, the garden-beds are laid out in order, where flowers grow in perennial bloom. In the midst are two fountains, one of which serves to water the garden, spreading through it with its cool, refreshing streams, while the other flows beneath the threshold of the lofty palace.

Now, what modern orator of an agricultural fair, or what poet of modern times, has, or can excel this description of Homer, in as few words, and how few of the farmers of New England can yet boast of his garden luxuries like those here so vividly delineated in this one of four acres in a fabulous age of the world? N. T. T.

Bethel, Me., April, 1862.

For the New England Farmer.

THE BIRDS OF NEW ENGLAND---No. 18.

WARBLERS.

Black-throated Blue Warbler—Black-throated Green Warbler—Connecticut Warbler—Kentucky Warbler—Black and White Creeper—Yellow-throated Warbler—Mourning Warbler.

The BLACK-THROATED BLUE WARBLER, (*Dendroica Canadensis*, Baird; *Sylvicola Canadensis*, Swain,) winters in Mexico and the West Indies, gradually progressing northward in spring, as the season advances. It enters South Carolina about the first of April; appears in Pennsylvania about a month later, and in New York and New England usually about the middle of May. At Springfield, I observed them very common for a few days about the 22d of May, in 1861, but they are usually considered as "wayfaring and unfrequent visitors." They are known to breed in Nova Scotia, and are found to exist in summer as far northward as Labrador. Doubtless a few "nidificate in the northern parts of New England. According to De Kay, they have been seen in this latitude as late as December, returning on their way southward. In their habits they much resemble the other Warblers, being extremely active in the pursuit of those insects that constitute their food. Their song is low and somewhat peculiar, but not remarkable for melodious effect.

Length, five and a half inches; extent, seven and a half; upper parts, wholly a light blue slate; throat and upper part of the breast, black, which extends in a broad, lateral stripe to the tail; rest of the lower plumage, white; tail, with white spots on the inner veins of the exterior feathers; a spot of white at the base of the primaries of the wings. The female is so differently colored from the male as to have been described by the earlier ornithologists as a distinct species, under the name of

Pine Swamp Warbler, (*Sylvia sphagnosa*, Bonap.) The distribution of the color is similar, but where the male is blue the female is a deep green olive, with bluish reflections; lower parts, pale greenish yellow, more dusky on those parts which in the male are black. Wings and tail marked with white, as in the male.

The BLACK-THROATED GREEN WARBLER, (*Dendroica virens*, Baird; *Sylvicola virens*, Swain,) arrives from the south in May, frequenting alike the blooming orchard and the deep forest and solitary swamp, on its first arrival; feeding chiefly on the insects that at this time prey upon the opening buds and tender leaves; a few spend the summer here, being met with occasionally in the retired forests, but the greater number pass further northward, and in July have been met with in Greenland. It is a very active little bird, and like most of its congeners, is continually searching among the foliage for its winged prey; its notes are not particularly remarkable, though somewhat peculiar and pleasing. Nuttall discovered its nest in the eastern part of this State, and a number of specimens have been obtained in the vicinity of Springfield, by ornithological collectors, in June and July of the year last past.

Length four inches and three-quarters; extent, seven; above, bright yellowish-green; throat and upper part of the breast, black; streaks of the same on the sides, under the wings; belly and vent, white; two bars of white across the wings, which are dusky; exterior tail feathers spotted with white on the inner veins. In the female the colors are paler, and the black on the throat is nearly concealed by the ashy edgings of the feathers.

The CONNECTICUT WARBLER, (*Oporornis agilis*, Baird; *Sylvicola agilis*, Jardine,) is one of the rarest birds of its tribe, and comparatively little is known concerning it. It was first seen by Wilson, who first met with it in the State of Connecticut, and accordingly gave to it the name by which it is now known; and from its extreme agility he bestowed upon it the Latin specific name it now bears. This untiring ornithologist met with not more than half a dozen individuals in all his extensive travels; subsequently it has been seen in various parts of the eastern portions of the United States, but is still so rarely met with that we have no particular knowledge of its manners. By some it has been considered as the young of the Mourning Warbler, (*Geothlypis Philadelphia*), which it is said very much to resemble, but is now, I believe, regarded generally as a distinct species.

Length, five inches and a half; extent, eight; whole upper parts, yellow olive; throat solid white; breast, greenish-yellow; rest of the lower parts, deep yellow.

The KENTUCKY WARBLER, (*Oporornis formosus*, Baird; *Myiodiocetes formosus*, Aud.; *Sylvicola formosa*, Jard.) is a common and even abundant species in some of the Western and Southern States, but as far eastward as New York and New England it is quite rare. It is described as an extremely active and lively bird, "frequenting low, damp woods; it builds its nest in the middle of a thick tuft of rank grass, sometimes in the fork of a low bush, and sometimes on the ground." "The materials are loose, dry grass, mixed with the light pith of weeds, and lined with

hair. The female lays four, and sometimes six eggs," says Wilson, "sprinkled with specks of reddish." It hunts for its prey among bushes, and tall weeds, and grass, seldom flying farther than a few yards at a time, and seldom seizing its prey on the wing. Its song is described as lively and agreeable, resembling the words *tweetle, tweetle, tweetle*, uttered rapidly and with emphasis.

Length, four inches and a half; alar extent, six and a half; upper parts olive, with streaks of reddish on the back; under parts, rich yellow, with streaks of black on the sides; spots of white on the tail.

The BLACK AND WHITE CREEPER, (*Mniotilta varia*, Vieillot,) enters Louisiana in February from the southward, as the buds on the trees are expanding and unfolding into leaves, and in its migration northward keeps pace with the advancement of vegetation, and spreading over the United States, reaches New England about the first of May, many still passing farther north. They breed throughout the whole of this extensive region. In its scansorial habits this bird greatly resembles the true Creepers, (*Certhie*), but more nearly resembles the Warblers in the form of its bill, and in many other points. It seldom perches on the twigs, but runs over the trunks of trees, in every direction, with great facility, and traverses the under sides of the larger limbs, back downward with perfect ease, carefully searching the bark and every crevice for its insect food. When it first appears in the spring, from the south, it sometimes frequents the orchard, but generally prefers the forest, where it spends the summer and rears its young. Its nest is "generally found in the hole of a tree; and is composed of dry moss, lined with downy substances. The eggs are four to seven, white, with a few reddish dots disposed around the larger end."

Length, about five and a half inches; extent, seven and a half. Whole plumage, alternate streaks and spots of black and white. Female considerably paler than the male.

The YELLOW-THROATED WARBLER, or MARYLAND YELLOW-THROAT, (*Trichas personatus*, Swain,) is one of our most common species, appearing from the south in the early part of May, and continuing with us through the season. It prefers low woodlands, swamps, and swampy hedges and thickets, where it rears its young, placing its nest on the ground, usually concealed in a thick tuft of grass. It is composed of fine grass, lined with horse hair, and sometimes arched over. The eggs are four to six, white, with a few reddish specks around the larger end. It is not at all shy or suspicious in its behavior, but boldly scolds the intruder, especially during the season of incubation, as he chances to venture upon its favorite, secluded retreat. Though not properly to be included among our birds of song, its simple lay and oft repeated *whitittee* are far from disagreeable. It inhabits the whole eastern United States, and considerably to the northward, but is said to be particularly numerous in the swampy districts of Maryland and adjoining States.

Length, four inches and three-quarters, breadth of wing, six and a half; upper parts, greenish-olive; beneath, deep yellow, lighter on the belly; front, sides of the head and neck, black. The female is somewhat paler and has not the black.

The MOURNING WARBLER, (*Trichas Philadel-*

phia, Aud.; *Geothlypis Philadelphia*, Baird,) was first introduced to public notice by Wilson, who only met with a single individual, a male, which Wilson says "had a sprightly and pleasant warbling song, the novelty of which at first attracted my attention." So scarce is it that no other was seen by ornithologists for several years, and it began to be conjectured that the specimen described by Wilson might prove to be merely an accidental variety of some other species, as perhaps of the preceding, (*T. personatus*), to which it is related. It has, however, been occasionally met with since, in various parts of eastern North America, and it afforded me not a little satisfaction a few months since, (Sept. 12th, 1861,) to meet with one of these birds, though in its autumnal or immature dress. From its excessive rarity but little is known of its habits. The individual above alluded to was darting about with great agility after flying insects, among the alders and low trees in the swamp where it was obtained.

Length, five inches; extent, eight and one-fourth; above, uniform greenish-olive; cheeks, throat and breast, buff, inclining, on the breast, to dusky; rest of the lower plumage, bright yellow; tail emarginate, and with the wings, strongly tinged with greenish-olive.

J. A. A.

Cambridge, March, 1862.

EXHIBITION OF FRUITS AND FLOWERS.

We are glad to learn that the *Concord Farmers' Club* has decided to hold an exhibition of Fruits and Flowers in that town on the third Saturday of June, the third Saturday of July, and the third Saturday of August, ensuing. But this is not, if we understand the matter correctly, to be done exclusively by the Club, as it is expected that other citizens will be joined with the members of the Club appointed to carry out the plans, and that contributions to the exhibition are expected from the citizens generally. With this view, we suggest to the good people of that town to make such preparations now as will enable them to assist in gracing the show with the productions of their flower-beds and gardens.

The occasion is to be open and free to all, either to contribute to or to visit. We predict that these exhibitions will be creditable to the citizens of the town, and occasions of interest to all, but especially so to the children.

A FOX STORY.—One day last week a party of sportsmen belonging in this city and Boston went on a fox hunting expedition to Chelmsford. On "Thanksgiving Ground" they ran a fox into his hole, and then commenced to dig for him. After working smart a number of hours, they came upon a nest of young foxes, not having their eyes open, one of which was brought away. One of the party having a litter of young kittens at his house in this city, placed this young fox with them, and it takes its nourishment with the rest, and is now doing well. The old cat purs over the little stranger, and does not seem to notice any difference between it and her own family.—*Lowell News*.

For the New England Farmer.

WORKING HOGS.

MR. EDITOR :—I saw in your last January number a short article on working hogs. It is generally believed by farmers that hogs are valuable stock to keep on a farm, not only for the flesh, but for the manure they make, and for the labor which they do on the manure heap. Now this is a grand mistake. Hogs can never create any manure ; all that they can do is to leave the surplus of what you give them after taking out the nourishment of their bodies. As to their working on manure heaps, I should rather they would work on their own land, as there is nothing so injurious to a manure heap as to keep digging and stirring it over, and this is a work which many farmers want their hogs to do.

It is painful to see farmers drawing out their summer manure in the fall, and turning it down in heaps on their plowed fields, there to take the peltings of wind and storm through the winter, and then in the spring draw out their winter manure and pile it on top, then dig it over two or three times before they get it into the ground. Did you ever hear of any one offended with the smell in digging over a heap of manure managed in this way ? The reason is plain ; the gases go to the four winds, and its nutritious quality is wasted.

My object in these remarks is to show the farmer the loss he sustains in exposing his manure heap to the action of the air, sun and rain, and the depredations of working hogs. The success of the farmer depends very much on the amount of manure he can procure for his farm, and the easiest way to get it, is to furnish every animal about the barn with a sufficient quantity of soil, muck, or vegetable substance, to absorb all the liquid, so that nothing will ooze out and be lost ; then keep the manure heap as much as possible from the action of the air and the rays of the sun, tramp it down as hard as you please, the harder the better, and one cord of such manure is worth two cords worked over repeatedly, and exposed to the wind and storm.

Farmers, try the experiment. Plow in one cord of each, side by side in your field, and you will soon be convinced. H.

Derry, N. H., March 20, 1862.

For the New England Farmer.

THE TURNIP CROP.

Although the turnip is raised and used extensively in Europe, as a valuable feed for milch cows and stock in general, yet in this country they are raised and fed very sparingly, as the prejudice against them has arisen from the fact that they impart an unpleasant taste to the milk. I admit that this is the case when first fed in the fall, "for perhaps two weeks," but continue to feed them, and after the expiration of two weeks the most particular taste cannot detect any unpleasantness in the flavor of the milk. I have kept two milch cows the past winter, principally upon English turnips ; they have consumed but about 1200 pounds of hay, each cow having had one bushel of turnips and one-half bushel of carrots per day. The milk has been used in five different families, without any complaint ; the cows keep in good

flesh and have given a good supply of milk. The turnip crop I consider one of the most valuable for the stock farmer, as it can be raised at a very trifling expense, compared with any other crop. The turnip can be sowed after early vegetables are taken from the land. I had about an acre of land from which I took a good crop of English hay last July, I then plowed and sowed it with English strap-leaved turnip, from which I gathered the same season upwards of 200 bushels, using but 320 pounds of Mapes' super-phosphate of lime. This season I intend to sow it down with Hungarian grass, therefore losing no time, and raising the turnip at a trifling expense. J. S. I.

Salem, Feb. 12, 1862.

THE DAM AT NORTH BILLERICA.

We give below a little piece of history in relation to this dam, which is probably not generally known. At the hearing before the Legislative committee, in February last, one of the counsel for the Talbots occupied a considerable portion of his argument on the point that *no complaint* had been made by the early settlers of the town that this dam was a principal cause of the flooding of the meadows. The following facts are incontrovertible, and show what sort of agency is resorted to, to continue this unjust and wicked oppression upon an unoffending and long-suffering people.

There is no one thing that so disgraces the State of Massachusetts as the law upon her statute books, that allows the *private property of her citizens to be taken from them without their consent* ! It is a shame upon her fair fame, and is sustained, entirely, by a combination of the manufacturing interests, to the great wrong of many of our best citizens, and injury to our agricultural prosperity. Let us see what are some of the facts.

His Excellency, the Governor, in his last annual address to the Legislature, called the attention of that body to the subject of flowing and draining lands in the following words :—"In this connection I desire also to call the attention of the Legislature to a measure of justice and public utility which will restore to cultivation many acres of the richest and most productive lands in the State." This subject of flowing and draining lands received the attention of the General Court early in the last century, and an act was passed in 1702, designed to relieve wet lands of their burdens, and to make them valuable to the colonists. The Commonwealth might be benefited by an act of similar import, if the provisions of it could be faithfully carried out.

The act to which allusion has been made is styled "An Act for appointing Commissioners of Sewers." The preamble to this act is stated in the following language : "Whereas, great quantities of meadows and low grounds belonging to sundry persons in several towns, are spoiled by

the overflowing of rivers, brooks and waters, occasioned by banks and stoppage in their courses, which by industry may be removed to the benefit and profit of the owners; and also much meadow and pasture land might be gained out of swamps and other rough and unprofitable grounds by draining the same: To the intent that the owners of such lands and meadows may be encouraged and enabled to remove such obstructions as occasion such overflows, and to drain and flow their swamps, and other grounds, and thereby bring them to meadow or pasture, that they may be profitable to them, Be it enacted, &c., that it shall be in the power of the Governor and Council, from time to time, upon request to them made by the major part of the proprietors of any such lands, to grant commissioners of sewers to such and so many able and discreet persons as to them shall seem meet for the clearing and removing of the banks and obstructions of the passage of the waters in rivers, brooks or ponds that occasion the overflows of and drowning of low meadows and lands."

From this extract, the general intent of the law is manifest. This law was not allowed to remain a dead letter upon the statute book. Commissioners of Sewers were appointed. One of the streams which they were directed by the Governor and Council to visit, upon the petition of land-owners, was Concord river. The meadow-owners upon this stream, about the year 1720, represented to the Governor and Council that their lands were overflowed, and prayed to be relieved. A commission of three were appointed and directed to visit this stream, in order to determine by their own observation, the condition of the river. This commission reported to the Governor and Council. In their report they say that they "visited and sounded said river, or a great part of it, and made the best endeavor we could to find out what and where the obstructions were, that caused the overflow of the said river, to the spoiling of the meadows of Concord and Sudbury." They said that one obstruction producing this effect was a dam across this stream in Billerica, erected by Christopher Osgood. Of this dam, they say, "which in our opinion very greatly hinders the water's discharging itself. We have, therefore, ordered and determined that the aforesaid dam, stoppage or obstruction be so far pulled down and removed as to give the said river its usual course and channel, that being the only place to begin the work at of clearing the said river to relieve the complainants or petitioners, and that nothing can be done that will be profitable until said obstruction is removed." They appointed seven men to execute their order.

Immediately Christopher Osgood petitioned the Governor and Council, to have the execution of

this order delayed, "until a further view, examination and report be made of the said river and the influence the said dam may have towards the overflowing of the said meadows." In the petition, he states that he employed three men to view his dam, who surveyed and sounded at the dam and the ford-way above, and found the top of the dam to be three feet lower than the bed of the river at the fording place. Mr. Osgood's prayer was granted. A committee was appointed to view the premises. This committee reported that they "having been on the spot at two several times, once when the water was high and once when it was low, and viewed the said mill, mill-dam and the river as far as Concord, are of opinion that the demolishing of the said mill-dam of Christopher Osgood, will ease the said river and help the meadows above." This report was read in Council, when it was "ordered that the Commissioners of Sewers proceed forthwith in the execution of their commission.

The Commissioners of Sewers discharged their duty, and the dam was demolished in 1722. Those who executed the order were prosecuted by Mr. Osgood for trespass, on account of demolishing his dam by "force and arms." The action was brought in the "Inferior Court of Sessions." The defendants answered that they acted under an act of the Province, and that "any person aggrieved at any procedure" under this act may appeal "to the Governor and Council for relief." The defence was sustained by the court, and Mr. Osgood was ordered to pay the costs of the action. The plaintiff appealed to the Superior Court of Sessions. This court sustained the decision of the Inferior Court, and this case seems to have ended here.

For the New England Farmer.

GIRDLED TREES.

MESSES. EDITORS:—I fear that the depredations of mice in young orchards, the past winter, have been very destructive. My own observations, and the lamentations of others over their disappointed hopes, lead me to this conclusion. With very young trees, I suppose the cheapest way is to re-plant, if they are nearly or quite girdled; but larger trees, say from two to three inches through, I think may be saved in another way, which may not be new, but which I have seldom seen practiced. I will relate my own experience. A few years since I had a fine, thrifty pear tree, which, in the spring, showed evidence of deadly blight in the bark at its foot, it being completely black and dead for ten or twelve inches above the ground, while the top appeared sound and well. I did not like to lose the tree, so I went to a nursery and procured three thrifty seedling pear stocks, about as large round as my finger. These I cut off at the proper height by a slanting cut such as is used in splice grafting, and planted them carefully as near the trunk as I could conveniently, leaning them towards it. I then, with a sharp knife, cut

a wedge-shaped piece of bark from the trunk of the tree opposite each stock, extending up into the healthy bark about two inches, thus \wedge , then shaping the stocks to fit the opening accurately, I bound them in with matting, and applying a little grafting wax to keep out air and weather, left the rest to nature. The result was, that I saved my tree, and now have it in a very thrifty condition, standing on three legs. There is no difficulty in the operation, and the saving of a nice tree is well worth the trial.

A good deal has been said about the best time for pruning trees. I have found no bad results arising from pruning them at this season, always covering the wound with grafting wax, made by melting together equal parts of beeswax, resin and mutton tallow; this excludes the weather effectually, and is easily applied, and costs but little.

Worcester, April 13, 1862.

M.

For the New England Farmer.

COST OF CUTTING GRASS.

MESSRS. EDITORS:—I have read the report of the agricultural discussion, on Monday evening last, with much interest. Like theological discussions, it is very clear that much may be said on both sides. How much of this discussion was brought out by the hard-hands themselves, who have learned their lessons in the field, under the sweat of their own brow, I must leave for others to estimate.

I notice an eminent farmer of Essex County maintains, that when English grass can be cut for one dollar per acre, by the scythe, it is not expedient to use a mowing machine. Now I thought, it had been demonstrated again and again, even on the farm of this same gentleman, that the expense of cutting such grass, by the use of a well-constructed and regulated mowing machine, need not exceed half a dollar per acre. If, then, it is a demonstrable fact, that one-half the expense of cutting grass can be saved by the use of such a machine, why not use it? If gentlemen deviate as far from the fact, on other topics, as in this, what reliance can be placed on what they say?

I had thought the improvements within the last thirty years, in the plowing of land, and the cutting of grass, two of the most prominent occupations on the farm, were marked and certain; and shall continue to think so, until I learn the contrary, from authority more reliable than that of

March 29, 1862.

FANCY FARMERS.

LAWYERS.—Many persons suppose that lawyers thrive upon the misfortunes of business men in general. But gentlemen of the bar well know how completely unfounded is this impression. Their prosperity is intimately identified with that of the other classes of society, for the increase of proceedings of a vindictive nature but poorly compensates for the great falling off in negotiations and transfers in contests carried on in good faith between responsible parties seeking to test doubtful questions, and in the collectable proportion of judgments. It is well that it is so, for it would be a serious misfortune to any community to have in its midst a numerous educated and influential class with an interest adverse to that of the rest of society.

For the New England Farmer.

HOW TO DRAIN---MANURES.

Your correspondent H. T., Rutland, Mass., puts the question relative to draining a certain ten-acre lot. I have a lot not so large, but similar to the wettest portion of his; in answer to him, I will give the mode in which I treated mine. On one side the lot was washed by a brook; on the side opposite the brook a hill, at the brow of which I caused a ditch to be dug five feet deep; at the bottom I laid stones, with the upper edges together, leaving a space in shape resembling the letter A, covering to the depth of two feet with small stones and a laying of hassocks, then replaced the muck from the head ditch, and had others to conduct the water to the brook built in the same mode. Five years have passed since; the land has been completely rid of water, and has produced first-rate crops. I find the above used material to be cheaper than tile or plank, and less trouble. Most every farmer has them at hand, and wishes to rid himself of them; certainly there is no one but can try it in a small way, and if so successful as mine, will follow it.

Another correspondent asks—"Will Concentrated Manure Pay?" I find that the only dressing that pays with me is that which is in the reach of every farmer on his own farm, viz.: the droppings of the cattle composted with muck, urine, leaves, soap-suds and the contents ejected from the sink spout. If the farmer who buys these highly puffed fertilizers, takes the time in which he earns the money to purchase them, devotes it to the collecting of materials for the compost heap, he will find that he would gain greater results from that gathered by himself than that which he bought. For some years past I have tilled but a small area of land, manuring it highly. I find more profit than in a larger quantity, with less manure to the same space of ground. I find that after land is well seeded down to grass, it is not best to disturb it, but to apply the dressing as a top-dressing, saving expense of cultivating, and getting greater return for the amount expended.

Cape Elizabeth, Me., April, 1862. S. P. M.

SURFACE OF GARDENS.—In the fine surface soil of old gardens, the seeds of a multitude of plants, as well as many insects, or their ova, find a lodgment. In order to get rid of them effectually, it is a good plan to collect all the rubbish of the garden in the spring, together with the prunings from trees, and brush and weeds from pastures, and burn them on the ground. The limbs of the fir, spruce or hemlock, which many can command in any quantity, or indeed, any combustible material of little value otherwise, will answer as fuel for this purpose, and add also to the fertility of the soil by the ashes it leaves behind. But, of course, this can only be done on that portion of the garden where there are no perennial plants, unless the soil be scraped away into little heaps, burnt over and returned to its place. This would save a great amount of weeding, and destroy many insects—so that the operation may be found profitable in a great many cases.

FENCES.

We do not often feel at liberty to exclude articles from our columns that question the right to patents or improvements that are claimed, when they are written in a kind spirit, and with an apparent intention to subserve the cause of truth and justice. With these views we published the note from our "South Amherst" correspondent, believing that Mr. Smith would be able to defend his interests if unjustly assailed. His statements may be found in the letter below.

Haverhill, N. H., May 5, 1852.

DEAR SIR:—I read with some surprise the communication from the South Amherst man about my fence. As I wish to have the matter fairly understood by you and the publishers of the *Farmer*, I take the liberty of again writing you, that strict justice may be done to all concerned, and trust you will excuse the frequent use of the personal pronoun, which may occur.

In the first place, I will not deny that two persons, distant from each other, may devise precisely the same improvement, but this is not likely to happen.

In justice to myself, I will say that, with the exception of three years, my life has been spent on the farm I now occupy; and for many years, fences, and the improvements of them, have occupied more of my thoughts, by day and by night, than any, if not everything else. I do believe I never dug a hole in the ground and put a post of wood in it, since I came to years of reflection, and felt right about it, or satisfied in doing it. During my absence from home, as a teacher in Virginia, my thoughts were constantly running upon improvements in them, and while there, I planned two or three kinds, which I determined to try when back again on the farm. To be brief, eight or ten years ago, I tried the kind you have on your farm, without the grooving or the wire hold-fasts, and the first words I uttered, after nailing on the braces, were, "It is a triumph!" This fence, with the improvements, was exhibited at the New York State Fair, (too late for a premium,) and pronounced much better than any other. It was shown at the Vermont and New Hampshire State Fairs, and at each drew both premiums and diplomas. It has been built, (as at first,) on my own farm, by the sides of the main thoroughfare through this valley, and seen by thousands for eight years, and never, but in a single instance, has my claim as to its originality been denied, and that was by a man who had to leave town for *stealing* at a funeral! He said he had helped to build the same thing on the *railroad*. I asked how they did it? He replied, they laid down a sleeper, spiked the foot of the post to it, and nailed boards for braces, *a la mode* Vandermark!

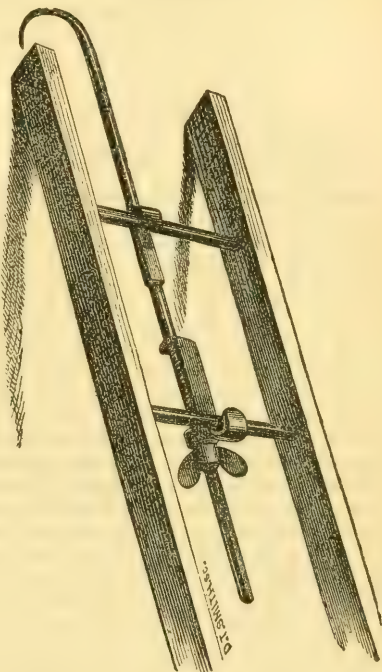
In one word, the fence, from top to bottom, is in every sense my own, as much as the able essay upon the value and uses of Swamp Muck in the Patent Office Report for 1856, is yours.

When at your place, you will recollect I showed you Munn & Co.'s letter about my patent. After stating the *claims* allowed, they say, "It is certain no one can build the fence with braces on both sides," and also, "We think you have got all you want."

I have written to a friend to investigate the South Amherst fences, and when heard from, wish to send an article for the *Farmer* in reply. My model was with Ex-Com. Burke more than two years before I would let the application be made, (wishing to perfect the fence,) and from that, or the fences here by the roadside, I think the South Amherst farmer got his fence ideas. Mine have been got by an immense amount of study and experiments, with *some failures*, and the theory is before the farmers of New England, with *every* claim as honestly and fairly mine as any work done during my lifetime.

CHARLES R. SMITH.

FARRAR'S PATENT ADJUSTABLE HOOK LADDER.



It is often said that it is the little things of life that go to make up its great sum. This truism applies especially to articles which are patented—as it usually is articles that are small and cheap, but those that are used by millions, which are really the most useful, and that best reward the genius and labor of the inventor. This adjustable Hook is one of them. The inventor gives the best account of its usefulness, and we will stand aside and let him speak for himself. He says:—

The inventor is aware that ladders have been furnished with hooks permanently attached to their sides. But hooks so attached are in the way when the ladder is used for other purposes than of ascending the roofs of buildings, and workmen are often obliged to carry a hook ladder to their places of business, or else go with an uncertainty as to finding one.

The object of this invention is to obviate these difficulties, and to furnish a hook which may be

easily transported separate from the ladder, and which may be applied to any ordinary ladder when required.

The Adjustable Hook can be attached to the ladder by clamping it to the two upper rounds, the clamp being made adjustable so that it may be fitted to ladders of different sizes, or in which the rounds are different distances apart. Two of the hooks can be attached to a ladder, but in ordinary cases I have found, when working on the roof, one hook is best, as the ladder can be more easily moved about, and one hook is sufficiently strong for ordinary purposes. Another advantage of this hook is that it can be applied to any part of the ladder.

Farmers, and all who have buildings, will find this hook very useful. Buildings may be often saved from fire by having one of these hooks at hand, as a ladder can most always be readily found, and the hook can be applied in a moment.

For the New England Farmer.

CRANBERRY CULTURE.

Having a great love for the cranberry, thinking it superior to any article that grows, for ordinary sauce for the table, I am always gratified to meet sound, practical instruction, from sound, practical men. Such I take Mr. Addison Flint, of Reading, to be. I know he and Father Sheldon, of Wilmington, sprung from the same meadow, and have conned their lessons agricultural in much the same manner. They are both somewhat positive in their opinions, and rather inclined "to stick to what they have said," be it right, or wrong. Now, so far as this sticking is concerned, I am decidedly in favor of it; for a man who will not stick to what he says, had better say nothing. I remember hearing the great Jeremiah Mason arguing to the Court some question of law, when the senior Judge on the Bench made a remark about the matter in hearing, when Mr. Mason turned to the Court, and said, "Will your Honors stick to that?" with a shrug of his shoulders at the same time, as much as to say, "You do not always stick to what you say." But the question is, how is this to be applied to cranberry culture? Mr. Flint thinks cranberries will be best grown, where the land can be completely flowed, and all other vegetation driven out by this flowage. Perhaps it is so. The very last season, I received a bushel of cranberries, from a man in Manchester, as handsome as I ever saw, who obtained the first premium of the Essex Society for the growing of cranberries. It was awarded by Mr. N. Page, Jr., a modest young man, who knows quite as much about the growing of cranberries as any other man among us, and has told what he knows, in a sensible essay, published in Mr. Secretary Flint's recent volume of the Agriculture of Massachusetts.

Since the experiment of Mr. Elias Needham, in the growing of cranberries on the upland, I have been accustomed to think, that none of so good quality could be otherwise grown. Nevertheless, it is quite certain, that the true position for the cranberry is on low, level ground, where a flow of water can occasionally be introduced. If I do not mistake, the culture of this delicious vegeta-

ble is destined to a great increase, and that there will be at least ten bushels raised, where there is now but one.

P.

For the New England Farmer.

NOTES FROM THE MONOMACK.

BY SAGGAHEW.

RINGING.—Most of the readers of the *Farmer* are doubtless somewhat familiar with the philosophy of "ringing" fruit branches, for the purpose of increasing the size of the fruit. It may be briefly, though imperfectly, explained as follows:

As the blood, after traversing the arteries of the human body to their minutest extremity, is returned to the heart through the veins, so the sap of trees and plants is returned to the roots, through appropriate vessels, or channels, located beneath the outer bark. If we compress the bark below a pear, or bunch of grapes, the sap, is impeded in its return flow, and, as experiments have fully proved, it expends itself in enlarging and perfecting the fruit below the stricture. The most approved mode of performing this experiment is by cutting out a narrow ring of bark just below the fruit to be experimented upon—hence the name "ringing." Fruit thus treated is much larger, and every way finer, than that upon the same tree, or vine, which has not been subjected to this process.

While conversing with a townsman, some months since, the subject of "ringing" chanced to be mentioned, and as he had never heard of it, I was induced to explain the operation, as well as the philosophy of the thing. On concluding, he pointed to a large apple tree standing in his garden, and observed, that, although it has regularly blossomed profusely, it for many years never ripened a crop of fruit. It seemed to have a confirmed habit of dropping its fruit, while the latter was quite small, and he had repeatedly almost decided to cut it down, as entirely worthless. But a few years since, he happened to read in some newspaper that if a ring of the bark on the principal limbs was vigorously *scraped*, just after the fruit had set, such trees would cease to drop their fruit before maturity. As the proposed remedy was a simple one, he tried it. The result was most gratifying. For the first time in its history, the tree matured a large crop of fine fruit. Since that time he has occasionally given the bark of the trunk, and the base of principal limbs, a good scraping, and the tree has borne him regular crops.

He had never heard of the philosophy of the process, and it was only when we explained the philosophy of "ringing" that the reason of his success in scraping his old apple tree flashed upon his mind. He observed that the simple remedy had saved him many barrels of fine apples and transformed a valueless tree into one of the most productive in his whole garden.

Are there not many such trees still casting their untimely fruit, and is not the hint which resulted so favorably in this instance, well worth acting upon in all similar cases? I think so. Will not some of the readers of the *Farmer* try the experiment, and note the result? I should add that, in obstinate cases, the scraping should be pretty severe, so as to be sure to impede the return flow of the sap, and thus compel it to expend itself in maturing the fruit.

For the New England Farmer.

SAWDUST AS AN ABSORBENT---TO MEASURE A TON OF HAY.

MR. EDITOR:—As I have used considerable sawdust for the last year, and with very good success, I do not hesitate to say that it is the very best thing to use for bedding under cattle and horses. It is very absorbent, and will take in a large quantity of water. Put it under the cattle and it will soak up the liquid, and keep them nice and dry. It is also a good fixer of ammonia. Every one knows, who is familiar with the horse stable, that on entering it he finds a very bad odor arising. If you would use a half-bushel of sawdust a day, for each horse, on the stable floor, it would prevent it entirely, and add greatly to the manure-heap.

TO MEASURE A TON OF HAY.

In the *Farmer* of November 30th, in an article on weights and measures, it is said that one hundred cubic feet of hay, in a solid mow or stack, will weigh a ton. I think this is a mistake, and it is very important that every farmer should know how to reckon up his hay, after he gets through haying. A mow of hay that is well stowed, will weigh out a ton to every five hundred cubic feet, or if it is of a very fine quality, from four to five hundred feet will make a ton. Five hundred cubic feet is as small a number as we can often reckon on a ton of hay in. A ton of pressed hay will measure over two hundred feet.

A. L. W.

Hope, Me., April, 1862.

REMARKS.—Thank you, sir. We do not find the article to which you refer, but if it stated 100 cubic feet for a ton, it was a mistake. We have often given these estimates. In the monthly *Farmer* for January, 1860, we give the estimates of several persons. One says, that "the top of a mow, say about one-third, would require 800 cubic feet to the ton; the middle 700 feet, and the bottom 600 feet." Another, that at the bottom of a mow 400 feet will make a ton, and that a whole barn full weighed out, averaged a little less than 500 feet to the ton. Another of our correspondents states that farmers in his region estimate that from 400 to 500 cubic feet to the ton, according to the position in which it lies, is sufficient.

BURSTING OF AN ICEBERG.

A few years ago, a French man-of-war was lying at anchor in Temple Bay; the younger officers resolved on amusing themselves with an iceberg, a mile or more distant in the Straits. They made sumptuous preparations for a picnic upon the very top of it, the mysteries of which they were curious to see. All warnings of the brown and simple fishermen, in the ears of the smartly-dressed gentlemen who had seen the world, were quite idle. It was a bright summer morning, and the jolly boat, with a showy flag, went off to the berg. By twelve o'clock, the colors were flying from the ice turrets, and the wild midshipmen were shouting from its walls. For two hours or so, they hacked and clambered upon the crystal palace, frolicked and feasted, drank wine to the king and ladies,

and laughed at the thought of peril where all was fixed and solid. As if in amazement at such rashness, the grim Alp of the sea made neither sound nor motion. A profound stillness watched on his shining pinnacles, and hearkened in the blue shadows of the caves. When, like thoughtless children, they had played themselves weary, the old alabaster of Greenland mercifully suffered them to gather up their toys and go down to their cockle of a boat and flee away. As if the time and distance were measured, he waited until they could see it and live, when, as if his heart had been a volcanic fire, he burst with awful thunders, and filled the surrounding waters with his ruins. A more astonished little party seldom come home to tell the story of their panic. It was their first, and their last day of amusement with an iceberg.

For the New England Farmer.

HOP CULTURE.

In reply to Mr. Stanford's inquiry in regard to raising hops, I would advise him to continue the cultivation of his yard, as I think they will command a remunerative price, from the fact that hops have been very low for a few years past, and consequently, many yards have been plowed up or neglected, so that the supply will not be as large for a few years to come as in years past. Having lived in Otsego county, the great hop-yard of New York, and worked in the hop-yards considerably, I will state their mode of cultivation.

The first year, they are cultivated like corn, no poles being set, and in the fall a shovelful of coarse manure is thrown on each hill, to keep them from freezing, and also to keep the land in good condition. The next spring the poles are set, two in each hill, as soon as they begin to show themselves out of the ground. The poles should be set very firm, to resist the winds, which exert a tremendous power on them when loaded with vines. Poles are generally cut eighteen to twenty feet long, which admits of their being sharpened two or three times if they rot off, as they always do in a few years. The land must be cultivated the same as for corn, keeping the weeds down, and hilling the hops up about the first of July, the same as corn. As soon as the hops are from two to four feet high, they must be tied to the poles with woolen yarn, putting two vines to the poles and cutting off all others close to the ground. Nothing more is necessary until picking time, except to keep watch and fasten up vines that happen to fall down, and re-set the poles if any should happen to blow over. The picking is usually done by women and boys at about two cents per bushel. Boxes made of thin, light wood, and holding from twenty to thirty bushels are used to pick them in; four picking in a box, and having one man to pull the poles, cut off the vines, and lay them on the box. Large sacks are used to carry them to the kiln where they are dried before they are marketable.

The size of the kiln must depend on the size of the yard. A yard of two acres would require a kiln about fourteen by sixteen feet, and twelve foot posts; the lower room seven feet between joints, and lathed and plastered, so as to be perfectly tight, except overhead, where there should be floor timbers eighteen inches apart, and a floor of

slats one and a quarter inches square, and laid one-half inch apart, and the whole covered with a kind of open cloth made for the purpose. On this floor the hops are spread from four to six inches deep, and a fire of charcoal made in the room below, and the temperature raised to about one hundred and twelve degrees. It usually takes about twelve hours to dry a kiln, they being stirred up every hour, and a teaspoon of sulphur put on the fire about as often; the object of which is to bleach or whiten them. After being dried so that no moisture can be extracted by squeezing them between the thumb and finger, they are taken off and prepared in bales of one hundred and fifty to two hundred pounds, and sent to market.

The poles are stacked upright in piles of about one hundred, and left until the next spring. Hops can usually be sold in any city where there are brewers, but I believe that New York and Albany are said to be the best markets for them in the United States. Any other information which I can impart in regard to their culture will be cheerfully given.

H.

Rensselaer County, N. Y., 1862.

EXTRACTS AND REPLIES.

PEAR TREES AND HENS.

I built me a hen-house last fall large enough for fifty hens, and this spring I intend to fence off one-third to one-half an acre for them to run in, and also intend they shall be kept in the yard, for if there is anything I dislike, it is to have hens in my barn or garden.

I am in hopes my hens will pay all expenses and leave a little profit; but to make sure, I intend to set out the yard as full of trees as I can, and have them do well. It seems to me that hens in an orchard of any kind of fruit will be of great benefit to the fruit and the trees; to the fruit, by picking up all insects that injure our fruit, if they should be unlucky enough to fall to the ground; and to the trees, by keeping the land in good condition. I should prefer to set standard pear trees, twenty-five to thirty feet apart, and then fill up with dwarfs, but do not know much about pear trees. The soil is thin, and consists of a gravelly loam, quite stony, on a gravelly subsoil, but it is rather moist and bears good crops of grass. The exposure is about south-east.

From the imperfect outline I have given, can you recommend me to set out pear trees?

A. J. ALDRICH.

North Blackstone, April, 1862.

REMARKS.—The land you describe is not so favorable for pear trees as a clayey loam would be, but by enriching and deepening the soil and mulching the trees so as to keep them moist, you may succeed.

ASHES AND NIGHT SOIL.

It is said by some that it is wasteful to mix ashes with the contents of the privy. Is it so? And if so, why, and to what extent is it wasteful?

Farmingville, 1862.

INQUIRER.

REMARKS.—It is supposed that alkaline substances mixed with green manure, set their ammonia free, which escapes and is lost.

SAVING SEED CORN.

FRIEND BROWN:—Your monthly visits to our yeomanry make us acquainted with the operations of others in the various branches of business employing our farmers through the country; the profit, or loss, or convenience realized by their different skill, economy and perseverance evinced in their management. Like us, having farms, buildings, fences, stock and fruit, with all the variety of soil, seeds, and culture, as well as time and place of sowing and harvesting and marketing or using—and the result of experience in the employment of machinery or manual labor, and all that relates to feeding and training both the family and the animals for the highest usefulness. A fund of knowledge is available at our homes, through the *New England Farmer*, giving our sons a taste for reading, and writing even, that will save the time and expense of travel for personal intercourse, or give double value to such travel for such information. Please accept a few words on saving seed corn.

Many years ago, I was particular to have the ears filled out with a kernel on the top. This was quite a saving and a gratification to me, and others, seeing how invariably it was secured. One old man said to me, "I have always picked the first ripe ears from the stalk in the field, thus gaining two or three weeks, and sometimes the ripening before a frost, and hundreds of dollars to my interest for such seed." Another man, on viewing my field, said, "My grand object has been to get twin ears to plant. I sometimes find three or four upon one stalk. I can assure you it pays well, but I never thought of the filling out and early ripening in saving seed."

Since then, I have adopted all three of these characteristics, and recommend it. The laws of our all-wise Creator are true, "What a man soweth, that shall he also reap."

BENJAMIN WILLARD.

Holyoke, April 9, 1862.

SEEDING WITH FOWL MEADOW.

I have a piece of land which I would like to lay down to fowl meadow. It is low and clear from stones; the soil is rich and composed of black mold. Now I would like to know which is the best time to sow it, spring or fall? If spring, would it be advisable to sow any other grain with it, and if so, what kind, and how much seed to the acre?

THOMAS GOLDSMITH.

Auburn, N. H., 1862.

REMARKS.—The common grains that we usually sow grass seed with, would scarcely succeed on lands suitable to grow fowl meadow grass. Sow in the spring. Some of the crop is usually left to ripen so as to sow itself annually. It is a fine seed, and we should think six to eight quarts per acre would be sufficient, perhaps less.

TO PREVENT COWS FROM KICKING.

Put a trace chain tightly around the cow forward of the hips.

I had a heifer last season that kicked so that she could not be milked. My man put a chain around her a few times, and it broke her entirely.

East Hardwick, Vt., 1862.

P.

HENS, TURNIPS, SELF-SUCKING COWS.

Will some of the readers of the *Farmer* give us their experience as to the profit of keeping hens on a larger scale than we find in almost every number of that valuable paper, with their mode of treatment, &c.? I keep 400 in 8 houses, which paid me a profit of \$200 on last year. When I have had more experience in the business, I will give you the particulars.

Will you also inform me why my ruta бага turnips (which I raised quite extensively for sheep last year) had an inclination to run up to seed, or had a stalk on many of them from 6 to 12 inches high? I got my seed from a respectable seed store in Boston, and supposed it to be good. Was it in the seed, or through some mismanagement on my part?

Also, will some one inform me how to prevent a valuable young cow from sucking herself?

CAPE COD FARMER.

East Orleans, April, 1862.

REMARKS.—We hope "Cape Cod Farmer" will get satisfactory replies to his questions.

GOATS AND HORSES.

I wish to inquire through your paper—

1. How much of the year will a goat give milk?
2. Which is the best, to let her breed once or twice a year?
3. Which is the best age to let a goat begin to breed?
4. What is the best fodder in the winter?
5. Will sheep and goats do well together?
6. Which is the best, plank or ground for horse stables?
7. What is good for bots and worms in horses?

A FARMER BOY.

Kensington, N. H., 1862.

REMARKS.—We cannot answer the questions in relation to goats. Wood ashes, mixed with cut feed will destroy worms in horses.

LEGHORN FOWLS.

In reply to "Subscriber" in the *Farmer* of April 12, I would say,

1. The piece I referred the gentleman to was in the *New England Farmer*.

2. It might not be pleasant to the writer of the article to have his name used in this connection. I dare say he was perfectly honest; but very likely had never seen many Leghorn fowls, and thought them as nice as others.

3. The gentleman who purchased the six fowls, was C. K. Hubbard, (opposite City Hall,) Worcester, who knows and keeps nice fowls.

If "Subscriber" is particular about knowing the name of the writer of the article I referred to, he can ascertain by addressing

New Worcester, 1862. C. K. HUBBARD.

HOW TO MAKE EMPTYINGS OR YEAST.

Having seen a number of receipts for making bread, etc., in your valuable paper, I venture to send you one for making emptyings: Make hasty pudding, (Indian,) in the usual way; as soon as it is cooked add three or four large spoonfuls of sour

milk, and a small quantity of rye, or wheat meal, or flour, to a quart of pudding; and after sufficiently cooled so as not to scald, stir in a little yeast and set to rise. Emptyings made in this way may be used, (adding a little saleratus,) to mix bread, dumplings, &c., with, using no other wetting, thus effecting a great saving in flour. Bread and other things, made in this way, are as good or better than when mixed with milk.

Cheshire, N. H., 1862.

SUBSCRIBER.

FINE BARLEY.

In 1860, from fifteen pounds sowing, I raised 480 pounds. It weighed from fifty-eight to sixty pounds to the bushel. I send you a head or two of the barley.

H. A. BUTTOLPH.

Shelburn, Vt., 1862.

REMARKS.—This barley is very handsome.

MACKAY SWINE.

Will you, or some of your correspondents, inform me where I can obtain two pigs, one male and one female, of the full-blooded Mackay breed of hogs, and oblige a subscriber?

F. H. S.

Northfield Farms, April, 1862.

PERILS OF CHAMOIS-HUNTING.

Three experienced shots of Appenzell were hunting on the Gloggeren, that lofty wall rising south-east from the See Alp, which one passes on the way from Weissbad over the Meglis Alp. One of them went by this lower path, a second higher up over Marwies, and the third hunter over a narrow grassy ledge on the rocky wall between the two first mentioned. The chamois were driven along this grassy ledge. The highest and lowest had easier going, and came earlier to the place where the combined shooting was to begin. The first saw the beasts coming to him, coming directly towards his rifle, and waited, looking out constantly for the third, who was driving them along the grass ledge. The chamois came gradually nearer; he is afraid of losing his shot, lies in a feverish state of excitement, fires, and, frightened at the report, the beasts turn and fly hurriedly along the ledge the same way that they had come. Just at a narrow sloping place, scarcely broad enough for a man to pass where it bends round a projecting rock, they came in their wildest flight upon the hunter climbing toilsomely upwards. If the two parties had met upright on this giddy rim of the rock, the hunter must infallibly have been dashed over a cliff sinking for more than 100 feet, as the chamois would instinctively in the agony of despair have tried to squeeze themselves between the rock and the hunter. The man prudently observed this, and to save his life, threw himself down and let the whole herd rush at a flying leap over him. Another hunter in Glarus, in a similar position at a critical place, thought that he might secure his booty by a quick resolve, and covered down sitting, wedged firmly against a rock, and shot. The charge missed, the chamois jumped over him, but touched him in his bounding elastic spring with one of his hind hoofs on the jacket, and tore its highest button-hole; a hesitation would have infallibly sent both over a crushing fall.—"The Alps," by H. Berelepsch.

For the New England Farmer.

AGRICULTURAL EDUCATION.

MR. EDITOR:—I hope I shall not be understood to be opposed to the study of agriculture itself, because I have opposed its introduction as a study into our common schools and colleges. There is need enough of the study of agriculture, but this is no reason why it should be introduced into our common schools and colleges which were designed and established for the purpose of giving instruction in other branches which are absolutely indispensable to the public welfare. Besides, these institutions have already as many studies as they can attend to and teach successfully; and they ought not to be perverted to other purposes.

Neither our common schools, nor our colleges, as at present constituted and conducted, can teach agriculture successfully, because they are not adapted to the purpose, and have not the means of doing it. They have not the land to cultivate, nor the means of cultivating it. The time and attention of the pupils, in both institutions, are necessarily devoted to other studies, so that any attempt to introduce the study of agriculture would utterly fail of success, and not only injure these institutions, but injure the interests of agriculture, also, by creating a strong prejudice against it, as a useless and unnecessary study. No; agriculture cannot be successfully taught in these institutions. They have not the means of showing the best way and manner of doing all kinds of farm work. This can be taught only on the farm, and under the personal supervision of a good farmer, who is able to teach by precept and example. And it is to be learned only by labor and application, by following the instruction and example of others, and by reading, reflection and study.

The only substitute for family instruction on the farm, is that of farm schools, established and endowed for the purpose. They are usually furnished with all the means of teaching all the branches experimentally and practically. They have all the means, including the necessary funds and teachers, to do it with. At home, on the farm, the scholar can learn no more of farm operations, than he is taught by the family and by the example of everyday laborers, and also by reading agricultural books and papers. But at the farm school he will enjoy additional advantages. He will not only be taught how to do every particular kind of farm work, but also the reason why it should be done thus and so, and not in a different way and manner. He will have an opportunity of witnessing all kinds of agricultural experiments, and of having the nature and operation of every process fully explained. Theoretical and practical lectures will be given in connection with every kind of farm work, so that the young farmer will be made to understand his business.

But after all, it is said, that scientific lectures are not adapted to the capacities of the young, and are liable to be misunderstood by them. That this is sometimes the case is very evident from the following example: A certain boy went to hear a celebrated minister lecture on the subject of Peter's denying his Master. The boy was very much pleased with the minister's beautiful lec-

ture, so elegant and so eloquent; and being urged to tell what the minister said that pleased him so much, "Why," said he, "the minister said that Peter swore three times before he crowed!" Such, however, is not the effect of scientific lectures when delivered in connection with farm schools, because they are always accompanied with visible illustrations and practical examples which make them intelligible and instructive. Still, it is undoubtedly true, in some degree, that those only who have prepared their minds by previous study, can profit much by scientific lectures. It is nonsense to think of pouring out knowledge upon those who are not prepared to receive it, and who make no effort to understand and reduce it to practice. To obtain a correct knowledge of the business of agriculture in its most minute details, requires study, thought and reflection, and a ready and willing mind to reduce to practice the lessons of experience. There is work to be done, and it must be done by those who would learn how to do it. The work must be done scientifically and correctly, as explained and exemplified by the teacher. No farm school can prosper, or be useful, which does not teach by example, as well as by precept.

JOHN GOLDSBURY.

Warwick, Mass., 1862.

THE STRAWBERRY.

(FRAGARIA VESCA.)

There are many varieties of this fruit, all of which are more or less valuable. The common native strawberry of our fields is but little cultivated, but it is nevertheless equal in value to many of the foreign and "improved" varieties. Being indigenous, it is necessarily more hardy, and with proper cultivation, is even more prolific. The fruit is not so large, but of superior flavor. The plants should be set in August, in rich, mellow soil, in rows two feet asunder, and about one foot apart in the rows. Compost, formed of putrescent vegetable matter, house ashes and plaster should be well worked in, and the plants frequently watered with soap suds, or water from the barnyard. A cask, filled with old muck, into which a few pounds of guano has been mingled, will form an excellent reservoir, by filling it with water. This may be drawn into a watering-pot and put upon the plants in the evening with great advantage. The water drawn from this mass should be quite weak, but if the season is at all dry, should be applied every evening.

The runners, of which many will appear the following season, should be removed, and the ground kept light and clear of weeds. As soon as the fruit is fairly formed, the spaces between the plants should be covered with straw or tan, to prevent the fruit, in its ripe state, from coming in contact with the dirt, and to prevent the growth of weeds and excessive evaporation. This covering may be kept in place by sticks or stones, or by throwing a little loose earth upon it, and need not be removed until the next spring. These re-

commendations are suggested for application where only a small portion of land is occupied, and where it is desired to secure the largest possible product. On a large scale, for market purposes, it is questionable whether this course would be the most profitable.

The strawberry, more than most other plants, needs a large amount of water,—and some cultivators who have been quite successful, state that they produce heavy crops on indifferent soils, by the use of large quantities of water alone. The best course is, to set the plants on a soil that would bring fifty bushels of corn per acre, supply water plentifully and keep the soil light and clear.

For the New England Farmer.

THE PARSNIP WORM.

MR. EDITOR:—In the April number of the *Farmer* you give quite a long account of the parsnip; speaking of the value of that root and the carrot as feed for stock. You figure a tortrix moth with the chrysalis and caterpillar, but only refer to it, without giving any of its history. I think that pure science and the application of science to use ought to assist each other; and often if you should give the history of a pernicious insect, it would help on agriculture, and at the same time furnish useful material to the scientific man. If you can, I should like to have you write the history of this moth.

In raising any crop, it is of great importance to consider what will endanger it; as sometimes a crop is completely lost, by neglecting to foresee and provide against its enemies. Very conspicuous among the enemies of our crops are the insects which feed upon them; and I think any information about them is valuable. The most important insect feeding upon the parsnip lives on other plants of the same family—the carrot, celery, caraway, parsley, &c. It is a caterpillar, at first of a black color with two wide white bands encircling it, afterwards it changes its color with successive moultings, and becomes green, with cross bands of black spotted with yellow, one stripe to each segment. When full grown they measure about an inch and a half in length, tapering from the fourth ring towards the head and tail. When disturbed they thrust out two orange-colored horns, of a soft substance, which diffuse a disagreeable odor, probably protecting them from molestation. The first brood of these caterpillars come to maturity about the middle of July, and change to chrysalides after suspending themselves by the tail, and a loop around their body, to a fence or anything that will give them support and protection. The chrysalis is generally of a straw-color, spotted with green and black. After remaining in this state about a fortnight the chrysalis bursts open and the butterfly appears. It is black, with two rows of yellow spots on the margin of the wings; the inner row often being absent on the fore wings of the female. Between the rows of yellow spots on the hind wing there is a row of blue ones, with a deep orange one on the inner margin. They expand about three and a half inches. These lay their eggs, which form a brood

of caterpillars in September and October, changing into the chrysalis state in October, to remain thus through the winter, coming out in the spring to lay eggs for the summer brood. A full description of the insect can be found in Harris' "Treatise on Insects Injurious to Vegetation," under the name of "Parsley-worm;" the scientific name is *Papilio Asterias*.

Do the best we can, our efforts would be of little avail in checking these insects, but we are not left alone to do the work of extermination; this caterpillar is attacked by an ichneumon of a brick red color with black wings, about three-fourths of an inch long and expanding an inch and one-fourth, which lays one egg in a caterpillar; which egg contains a grub that, as soon as hatched, feeds upon the caterpillar, eating at first the fat and other parts not necessary for the life of the caterpillar, but after that has thrown off its skin and become a chrysalis, it devours all the rest, leaving nothing but an empty shell. When the time for the butterfly to come forth has come, the ichneumon eats through the wing of the chrysalis and goes forth to destroy other caterpillars in its turn. To show how much aid these ichneumon flies are to the farmer, I will state that out of sixteen chrysalids I obtained last fall, two have come out butterflies and *fourteen* have come out ichneumons; take off a few such checks, and the results would be a host of caterpillars next summer, almost equal to the army worm of the last season.

But to secure the present crop, it will be seen that we must search for the caterpillars and destroy them ourselves, for the ichneumon do not kill them until they have done all the mischief they can; they prevent them from increasing the number next brood. Harris does not speak of this ichneumon in his book, so I thought some of your readers would like to know its history, and I described the butterfly for those who did not have access to the book at all.

CARLETON A. SHURTLEFF.

Brookline, April, 1862.

MIGNONETTE AS A TREE.

Buy a pot of ordinary mignonette. This pot will probably contain a tuft composed of many plants produced from seeds. Pull up all but one; and, as the mignonette is one of the most rustic of plants, which may be treated without any delicacy, the single plant that is left in the middle of the pot may be rigorously trimmed, leaving only one shoot. This shoot you must attach to a slender stick of white osier. The extremity of this shoot will put forth a bunch of flower-buds, that must be cut off entirely, leaving not a single bud. The stalk, in consequence of this treatment, will put out a multitude of young shoots, that must be allowed to develop freely until they are about three inches and a half long. Then select out of these four, six, or eight, according to the strength of the plant, with equal spaces between them. Now, with a slender rod of white osier, or better, with a piece of whalebone, make a hoop, and attach your shoots to it, supported at the proper height. When they have grown two or three inches longer, and are going to bloom, support them by a second hoop like the first. Let them bloom; but take off the seed pods before they have time to form, or the plant may perish. It will not be long

before new shoots will appear just below the places where the flowers were. From among these new shoots, choose the one on each branch which is in the best situation to replace what you have nipped off. Little by little, the principal stalk, and also the branches, will become woody, and your mignonette will no longer be an herbaceous plant, except at its upper extremities, which will bloom all the year without interruption. It will be truly a tree mignonette, living for an indefinite period; for, with proper treatment, a tree mignonette will live twelve to fifteen years. I have seen them in Holland double this age.—*Parlor Gardener.*

For the New England Farmer.

WHEAT BRAN AS A FERTILIZER.

MR. EDITOR:—A communication in the weekly *Farmer* of Feb. 22, 1862, from J. P., states that he has tried the experiment with wheat bran as a fertilizer for corn, and that it has failed. Now I must say that I am surprised at the result of his experiments with it in regard to corn; but with potatoes not, for it has been demonstrated in this vicinity to be worthless for them.

I quote from memory, but I think that I conveyed the idea in the said communication to which he refers, that it was practicable and profitable; at least, the fact was so established in my mind, by experiments tried by me the preceding year. And in the year 1860 I used it more extensively, side by side with Coe's superphosphate of lime, and was unable to detect the difference by the appearance in the growing crop. "J. P." himself would, had he seen it, have been obliged to "acknowledge the corn," and also acknowledge that it was better than sawdust, even after being composted by the cows, if he had seen a few rows that were left, by way of experiment, in which no fertilizer was used,—the opinion of his better half, to the contrary notwithstanding. The present year I intend to use it more extensively than heretofore, if possible.

The winter of 1861 was a very hard season for farmers, as forage for stock brought a very high price, and was very scarce at that, consequently, everything that would do for fodder was used to keep the stock alive, and another consequence was the scarcity of money with poor farmers. The result of this was the using of fertilizers to a less extent, which was the case with the writer of this article. I am not alone in the belief of the utility of wheat bran as a fertilizer for corn. Besides the statement of "T. G. H." in proof of this, I could get a list of names from this vicinity that would astonish "the natives." But it may be with this, perhaps, as with some other fertilizers, that in different kinds of soil it may have a different effect. Thus with gypsum or plaster of Paris, it has a much better and lasting effect on clay soil than on sandy soil.

Thanks to "J. P." I would be glad to have others go and do likewise, with regard to their experience.

WHAT KIND OF SAW.

Will "E. B. P.," of Mechanicsville, Vt., say what his saw is, whether it is circular or cross cut, as there is a difference in the application of the power to each.

J. S. S.

Vermont, 1862.

For the New England Farmer.

CHARCOAL DUST AS A DEODORIZER.

MESSRS. EDITORS:—The recent discussion in your paper respecting the use of various deodorizing materials to absorb the ammonia and other gases generated in stables, has recalled to my mind some experience of my own.

Several years since, I was preparing in my cellar enriching matter in a fluid shape for my greenhouse plants, but the effluvia arising therefrom became offensive. To counteract that annoyance, I applied a small quantity of charcoal dust. The effect was magical, and the compound became at once entirely inodorous. I then tried the dust in a large cask for rain water for use in my furnace, and in which the water would have an unpleasant smell. Here, too, the effect was all I could wish.

Previous to that time, my cistern water had caused me much annoyance. Whether because of the dust from the street in front, one of the most frequented of the city, but watered daily through the season, or from the surrounding trees and vines, or perchance because of the impurities of a city atmosphere deposited upon my roofs, the water in my cistern, even after repeated washings and scourings, would be dark colored, odorous, and offensive. Very naturally, therefore, I proceeded a step farther, and applied some four to six quarts of the charcoal dust to my cistern; first wetting it thoroughly in a pail, and pouring it in through the water pipes. The effect was immediate; and the result far beyond my expectation. The water became clear, pure and sweet as when it fell from the sky.

Not being disposed to keep to myself a matter so simple, and which added so much to the comfort and health of my family, I wrote a short article upon the subject, which was published in the April number, 1850, of the *Horticulturist*, and was very extensively copied through the whole country.

A few days after the publication, a learned professor suggested to me, that I had undoubtedly made a valuable discovery, but I might have put it in a more scientific shape; that I ought to take pieces of charcoal, heat them thoroughly, and throw them while hot into the cistern, and in that way I should effect a more favorable result in a truly scientific manner. My reply was, that the method I suggested was so perfectly simple, that people generally would derive more benefit from it than from a more scientific course, which involved greater trouble, nor could I see how any other mode could be more effectual. To the honor of that professor be it stated, that, some time after, he said to me, "I tried my plan for the use of charcoal, and then yours. In my mode of application, the charcoal had not the slightest effect; in yours, it acted like a charm, and seemed to render the water as clear and pure as if it had been distilled." The same professor travelled extensively in the West, that season, and on his return, in his own friendly manner, said to me, "You have acquired immortality more easily than any other person I ever knew. In all my journeying at the West, the first inquiry proposed to me, wherever it became known that I was from New Haven, was, 'Who is that Mr. R——, who has made the great discovery respecting the use of charcoal dust for purifying cisterns?'"

For the New England Farmer.

VARIOUS NOTES.

A learned judge of our city, when the article appeared in our papers, called upon me to inquire as to the precise mode of procedure. He said that his cistern had been repeatedly cleaned and scoured, and yet the water was dark colored and offensive, and for months they had been compelled to use bay rum with it, to overcome its offensive features. A few days afterwards, in answer to my inquiries, he said, "It worked like a charm. In three days, the water was sweet, and in a week, perfectly clear and pure."

All this is probably of little interest, or importance to your readers, except in so far as it may impress upon their minds the value of the mode proposed for purifying water. Most families use charcoal, and from the bottoms of their bins, can obtain, with a little care, enough of the dust to answer all their needs. It ought to pass through a sieve to remove the coarser particles, which are of little value, and may impede the action of the pump.

Recently, I have used dust from cinders emptied from locomotives at our railroad station. These cinders are prevented from escaping, by the wire gauze on the top of the chimney, but from these can be sifted out some so fine as to answer the purpose admirably. These railroad cinders are now used very considerably here as deodorizers in the removal of night soil, and undoubtedly would prove the very best article for use in stables, for the absorption of all offensive gases. They are exceedingly cheap. I pay a cartman for them, delivered at my house, about one cent per bushel.

Some three years since, I covered the surface of my rose and flower-beds, in the early part of September, as a protection against frost, since by their color, they attract and absorb more heat from the sun's rays, thus causing the more perfect ripening of the wood of my plants, and at the same time affording a farther protection, in that they covered the ground and prevented sudden evaporation, which carries off heat with such great rapidity. The experiment was entirely successful. Heliotropes, and other tender plants, remained untouched in the open ground until November, while in adjoining gardens, there were abundant evidences that frost had done its work.

If these cinders could be ground fine at a reasonable expense, they would be the *ne plus ultra* for use in stables. Indeed, as they come from the locomotive, they are probably by far the best substance that can be obtained for that purpose. Thus used, and then mixed with muck, or with pulverized peat, they would be invaluable.

CHARLES ROBINSON.

New Haven, Feb. 17, 1862.

OLD AGE.

You will look long to find a better description of extreme age than the following, which is taken from a play written in the year 1860, by Nathaniel Lee:

"Of no distemper, of no blast he died,
But fell like autumn fruit that mellowed long,—
Even wondered at because he dropt no sooner;
Fate seemed to wind him up for fourscore years,
Yet freshly ran he on ten winters more,
Till, like a clock, worn out with eating time,
The wheels of weary life at last stood still."

In your weekly of March 1st, I find two articles in strong contrast—the first on the production of the sugar beet for sugar and *brandy*, the other, in response to inquiries, taking a bold stand against tobacco. I am glad to know that we have some farmers whose consciences will not allow them to raise products, not only useless, but positively deleterious to the consumer; but it is with some surprise, as well as regret, that I find a correspondent of the *Farmer* holding up the inducement of great profits and large fortunes, as incentives to the production of an article, which, though it may indeed yield large money profits to the distiller and seller, must, if he has any regard for the welfare of others, do it at the expense of his own peace of mind, while its inevitable effects on the public at large are poverty and crime.

SNOW.

In the same number, an article from an exchange, after some very correct remarks on the advantage of a covering of snow for the earth, contains the statement that snow-water makes the skin harsh and dry, which any one who lives in the country will tell you is incorrect. The cause of this trouble (except in disease,) is often the use of hard water, or soap, or both, while snow-water is soft, and I find it the best remedy for roughness of the hands, &c. Some other items in the same article, I think, are contrary to the facts in the case, but as I have not yet proved them to be so, I let them pass.

FLESH OR FAT *versus* MILK.

"T. S. F." wishes to know how to treat a cow that gives so much milk as to keep her low in flesh. I infer from his remarks, that she did not give milk in the winter, and that advantage was taken of this to keep her cheaply. My advice would be, to adopt a contrary course, and after drying her off in the fall or winter, to take this opportunity to improve her condition. There will be no loss in doing so, because less food is required for a fleshy animal, and the milk will be more abundant, and richer in quality through the summer, than it would be from cows poor at the commencement of the milking season.

REMEDY FOR CURCULIO.

An extract from the Michigan *Farmer*, recently, recommends common elder as a specific for curculio. No harm will result from trying this, if it does not lead to the neglect of other and more effectual remedies, but I am of the opinion, that exemption from the curculio in this case was the result of some accident not observed by the fortunate orchardist. I have tried the same remedy for the striped bug, for which it has been recommended, with no effect, but to afford them convenient shelter in rough weather.

FEEDING MEAL TO CALVES.

In reply to my article on the above subject, "H." says reason would teach a man better, than to give "young calves a large quantity of corn meal." One would think that this would be so, but I have seen enough to convince me that some words of caution are not superfluous; probably because many persons do not realize how small a quantity, comparatively, is required by a young

calf. I think if your readers generally adopt "H.'s" plan of feeding potatoes, they will not always be as successful as he claims to have been, although he *may* have equalled his neighbors without any great success, after all. I have tried various methods of feeding, and have raised two or more calves to each cow, but my experience and observation, as well as reading, have convinced me that it is not profitable to raise any inferior, or even medium stock, and that every animal should be *kept gaining* until fully grown, or until sold for beef; and that the best way to do this, is to depend mainly upon milk for the first three months, and to begin with the lighter grains, leaving the heavier and more heating kinds, like corn meal, to finish off with.

WM. F. BASSETT.

Ashfield, March 17, 1862.

EXTRACTS AND REPLIES.

A SICK STEER.

You will oblige me by stating the symptoms of the cattle disease. I have a four-year old steer that coughs a good deal, and rattles at the lungs some. He took cold, and I don't know whether the cough arises from that or the cattle disease.

GEORGE JENNINGS.

REMARKS.—The marked symptoms of the disease called pleuro-pneumonia are a short cough, particularly in the morning, or when the animal rises or is allowed to drink. Appetite slight and variable. Short and unequal breathing. The animal rarely lies down, or only for a short time, either upon the affected side or on the breast bone, with the fore feet beneath them or stretched out in front. The hair upon the chest and neck loses its lustre and stands up. The skin is dry, and is more firmly attached to the withers and walls of the chest than to other parts. Water excites cough, and is taken with difficulty. From the dry mouth, there flows more or less viscid, dirty, offensive fluid or a frothy saliva. The urine is dark brown, has a strong odor, and is passed with difficulty.

WHEEL HOE AND SWEET POTATO.

I notice the inquiry of John H. Constantine, of N. H., in the last week's *Farmer*, for an implement to weed carrots by horse power. I do not think the Yankee is yet born who is to invent a machine that can discriminate between a weed and a carrot top; indeed, it is more than careless hands always do. And until this is done, (though we now have many excellent machines for cultivating between the rows,) we shall be necessitated to go through the back-breaking process of hand-weeding, which is the great drawback in raising this invaluable esculent. I have a wheel cultivator, made in New York city, which works very close to the rows, not leaving, if carefully used, over two inches in width, to be weeded by hand.

I noticed in the same number of the *Farmer* an article recommending the growing of sweet potatoes in our latitude. A word of caution, brother farmers, from one who has seen this elephant, and just allow the Jersey and Delaware people, with

their warm light soils, and more suitable climate, a monopoly of this article, and not endeavor to cultivate a semi-tropical plant in New England, and possibly make yourselves a laughing-stock to your neighbors. Look well to the source from which the advice to raise them comes, and see if you can discern any dull implement near by which needs edging.

W. J. P.

Salisbury, Conn., April 25, 1862.

TANNING SKINS—MANGOLDS.

Will you, or some of your correspondents, inform me through the next number of the *Farmer*, and by so doing, you will confer a great favor—

1. What is the *modus operandi* of tanning skins of wild animals such as coons, foxes, &c., with the fur on, so that it may be suitable for robes, coats, &c.

2. Should I set mangold wurtzel for seed wholly under ground, or partly out of ground, as they grew?

A READER.

Lempster, N. H., 1862.

A FACT AND A SUGGESTION.

Mr. ELLSWORTH SAWYER, of Templeton, informs us that he has a cow that carried her calf *ten* months and *four* days before dropping it. He also states that it is the opinion of intelligent and observing persons that, if male and female animals come together in the morning, or before noon, the progeny will be males—and if at night, females.

THE GOOSEBERRY.

(RIBES GROSSULARIA.)

This is one of our most common indigenous fruits, and one that admits of easy cultivation. There are also some improved and imported varieties of great excellence, but it is with the native kind that we have now to do. The gooseberry should never be set in shady situations, or where it will not at all times have the advantage of a free circulation of air. It is true that its position in the woods and swamps precludes this advantage in a great measure, but nature obviates the necessity of this, by restricting the development of foliage, which a richer soil, and the energizing effects of careful cultivation, promote. If we examine a plant in its original condition, we shall find that its foliage is less abundant and profuse than in plants set out in cultivated lands, and this circumstance secures it the benefit of free air, of which, in the latter situation, it is often injudiciously deprived. By setting plants in open situations, and covering the surface about the roots with salt hay, or common meadow hay, or straw, wet with a solution of salt in water, and keeping the tops thinned so as to admit the air and light, the gooseberry will rarely be injured by rust or mildew. Frequent irrigation at noon-day, with strong soap suds, has a very sanatory and invigorating effect upon this plant.

For the New England Farmer.

FARM BUILDINGS AND FENCES.

MR. EDITOR:—I have been much interested in your State Legislative agricultural discussions, particularly those upon farm buildings. Every farmer knows the importance of good barns; those that will not only keep the hay and grain, but furnish suitable protection for our stock; and they should be adapted to the kind of stock we intend to keep.

For many years to come, undoubtedly, sheep-raising will be the leading interest in much of New England, and some parts of the West. An immense national debt, the sure result of this iniquitous rebellion, will create the necessity for a high tariff for half a century, at least, and in this way may benefit this large class of our farmers. In this business we need barns and sheds which will shelter every animal, and also afford perfect ventilation. I would much sooner my sheep would go without food for twenty-four hours than be exposed to one rain storm in the winter. Some of our Vermont farmers understand this so well, that they will not let them be exposed at other seasons of the year. With their wool soaked with water, and then frozen for several days, no wonder some of them die. Protection and good air, as well as good keeping, are absolutely necessary for success in this business. No stock pays better for a reasonable allowance of grain through the whole winter, and grinding is not necessary. In feeding oats, with good racks, even threshing can, in a great measure, be dispensed with; and some of our farmers have fed boiled potatoes to their sheep with better advantage than to any other stock.

In keeping sheep, I have found that wall fences without anything on their tops, will not stop them. Except where stones are very abundant and lumber scarce, I should prefer a board fence, if it can be made durable. Smith's fences (one of which has been illustrated in the *Farmer*) were shown at our county and State fairs in 1860, and as to durability I think them as much better than other wooden fences, as a house or barn well up on a stone foundation is better than one with the posts standing in the ground. Almost the only objection there can be to them is, they cannot be used where there are no stone, as on the prairies at the West. His fence No. 2, put upon our roads and railroads, would save thousands of dollars every year, in keeping our roads open on account of snow drifts.

A SUBSCRIBER.

Chelsea, Vt., 1862.

PREPARING PAINT AND PAINTING.

The best, most durable and neatest kind of paint for any kind of tools or implements, is a light blue. This is far better than red, as blue will reflect more of the heat of the sun than red. Consequently, the wood which is painted, will be heated and sun-checked less when painted blue. During the warm days of March, let tools and implements be washed clean, and painted blue. To prepare blue paint that will dry soon, procure good boiled oil, which will cost about ten cents more per gallon than the unboiled. Procure a quart or more, according to the amount of painting to be done, of liquid drier or laquer. Then take one pint of oil, half a pint of drier, and min-

gle, by stirring in with a stick, enough white lead to make it about as thick as cream. Zinc white is the best, unless a man has an apparatus for grinding the lead. Zinc will require no grinding, but must be thoroughly stirred, and all the lumps mashed. Now put in one or two, or three table-spoonfuls of Prussian blue, and stir it thoroughly. But a small quantity of blue will be necessary to make a handsome blue paint. If it appears too light colored, put in more blue. Paint, prepared a few hours before it is used, will work better than that just prepared. If the oil and drier are good, paint prepared according to the foregoing directions, will dry in from one to two days, although it should be allowed from one to two weeks to become hard. For green paint, let the white lead or zinc, and oil and drier be prepared in the same way as for blue, and put in green, instead of blue. Continue to put in green until the shade is dark enough to suit the fancy. Yellow paint may be prepared in the same manner by using chrome yellow with the white lead.—*Country Gentleman.*

For the New England Farmer.

INFLUENCE OF ATMOSPHERE ON SOIL.

The above subject was discussed in the *Concord Farmers' Club*, on the evening of the 16th of January, 1862. I send you my recollections of the remarks of one of the members. Although aeration of the soil, or the bringing of the particles of the atmosphere and the particles of the soil into contact, and the chemical and fertilizing effects resulting from this contact, are in themselves distinct subjects, yet, practically, the two subjects must be considered together. Without bringing the particles of air and soil into contact, no chemical effect can be produced. Indeed, our principal work in relation to this matter is, by all the means we can devise, to bring about this contact. The laws of nature will set up and carry on the chemical actions, over which we can have very little control. One effect of draining is, to admit air in the place of water. This renders the soil light and porous, and enables the gases given off in the soil by the decomposition of manurial substances, to permeate through the soil, like the carbonic acid from yeast in bread. The atmosphere and gases thus introduced into the soil keep it in such a condition that the roots of vegetables can traverse it in search of nutriment. Without the presence of the oxygen of the atmosphere, putrefaction and fermentation cannot go on, as oxygen is the great agent in decomposition.

There are elements in the soil which have an affinity for elements in the atmosphere, and when they are brought into contact, they act on each other, and form food for plants, or stimulants which plants need. Frequent stirring of the soil brings these elements into contact. Alkalies and other salts, present in the soil, attract moisture from the atmosphere, and thus enable plants to endure drought. Plants in a rich soil, as experience proves, endure drought better than in a poor soil; and in a rich soil, salts of different kinds are always present. These salts are mostly deliquescent, or naturally attract moisture from the air, and dissolve. Hence in a dry time, soils should be frequently stirred. Draining, subsoiling and

deep culture, all contribute to bring the air and soil into contact.

This is, then, a practical subject. Plants, as well as animals, breathe. They cannot live without air; elements necessary to their growth are furnished to them through the medium of the soil, also. The atmospheric ocean by which we are surrounded, is the great storehouse of nutrition for them as well as for animals. Jethro Trull believed that plants derived all the elements of their growth from the atmosphere and water. In this he was probably mistaken. But it is undoubtedly true that soil hermetically sealed from the air cannot yield nutrition to plants. Organic substances closed from contact with the air, do not decay, and consequently, cannot be converted into food for plants. This is a broad subject, and these few remarks are suggestive of thought. They show us how the teachings of science and the results of the best practice perfectly agree. Careful experience confirms the lessons of science.

J. R.

For the New England Farmer.

WORK SHOP AND TOOLS.

MR. BROWN:—Being at present laid up for repairs, and not allowed the "liberty of the yard," I propose to make a few comments upon some items in your last issue. I am quite tenacious about disagreeing with one point in your editorial, viz.: workshops and common bench-tools for every farmer who is not independent enough to afford to pay some mechanic. I do not propose to argue for rich farmers, unless they have boys, in which case I must class them and their poorer neighbors together. I will not speak particularly of the profit, or saving, often resulting to farmers near or remote from mechanics, or of our mutual obligations to support their trades.

My own observations, which have been somewhat extended among Yankee farmers, are, that, as a general rule, the men who have poor tools and learned the use of them in boyhood to some extent, furnish the mechanics a greater amount of work than those who do no mechanical work at home. The cause is obvious. Such a man is accustomed to do little jobs in repairing and improving his tools, &c., and if, (as is usually the case,) he sees more such work needed than he has time to do himself, he cannot rest satisfied till he has employed another to put his little job in order. And this for the reason that the genteel hatter notices your hat and the boot-maker your boots quicker than the opposite. The result is, that you will find his tool more handy, his contrivances to save labor and thereby expedite his farm work more to your mind, than those who either go to the shop, or as is more often let alone, the various little jobs so often needing attention. Such men will use natural crooks and the old sled long after their time is out, because they can't go off to get it done at the shop. They will take down and put up two sets of bars for every load of hay or manure, where two hours and a hammer, axe and auger, will make a good substantial gate. Can't spend time to go off.

But this is not the main point. It is the moral effect of such workshops on farmers' boys. You, sir, speak of unpleasant recollections of those "rainy days." Your experience and mine differ

essentially. In all my boyhood, along with a baker's dozen of urchins, those rainy days would not come often enough.

Don't you remember the boats, and ships and houses, the saw-boys, the up-and-down saw-mills for the little brook, the water-wheels and wind-powers, the paring machines and tip-tops to amuse the little ones, the hand-sleds and the larger sleds that we used to make at Nod?

I do not argue that we were made richer in after life, as I might show, but I do affirm that for many a day we were contented to go out to the shop, instead of going to the village to associate with boys, who like ourselves, were ready to lead or be led into wrong practices and ultimately bad habits.

Now, sir, if I may be allowed a space in the *Farmer*, let me urge every farmer, whether rich or poor, who has boys, either his own or others' children, to have some tools, as many as he can, a turning-lathe if possible, and a place to use them, and let the boys have some of these rainy days, and see if the boys don't improve,—to say nothing of the additional care he will bestow upon his own farm implements.

P. J.

Vermont, March 3, 1862.

REMARKS.—Happy boy! And that often makes a happy man. We think we agree with you entirely. You were judiciously directed. Had opportunity to make things which *your own taste* prompted, instead of being obliged to delve every hour of every rainy day in patching up old harrows and ox-carts. We are decidedly in favor of the tools and the work-shop, and supposed we wrote so with clearness.

For the New England Farmer.

CARE IN PLANTING.

MESSRS. EDITORS:—I have recently met with several farmers who used Coe's superphosphate of lime last season on corn and other crops.

In some instances the corn failed to come up. In others it came up, and when 10 to 15 inches high, it assumed a sickly appearance and ceased to grow. My attention was called to a case of this kind last August. On examination, it was found that the phosphate had been dropped in the hill all in one place, covering not more than 2 or 3 square inches, a *little* earth placed over it and the corn dropped on it. The corn sprouted, and as the root extended downwards, it soon entered the phosphate, which was too strong for the tender root, and this caused the failure.

In using this powerful fertilizer there should be no more than two-thirds of a gill used in a hill at one time, and this should be spread over a surface of 4 or 5 inches and should be mixed with the soil. Many persons have used a table-spoon to measure and put it on with. It can be more evenly distributed with the fingers.

Where it has been used and no failure from *this cause*, it is almost universally spoken of as having produced the best effect both in increasing the quantity and hastening the maturity of the crops.

JOHN R. HOWARD.

North Easton, April 21, 1862.

For the New England Farmer.

WHY FARMING IS NOT PROFITABLE---CROWS AND ROBINS---BOOKS.

MR. EDITOR:—When I was a school-boy I had a copy set in my writing-book that read thus: "Many men of many minds." I find this to be a great truth in relation to almost any subject, and especially in relation to the subject of farming. In regard to the profits of farming, I have a word to say. My father was one of the old-fashioned sort of farmers, and he managed to accumulate as long as he was able to labor. He had a family of eleven children, all of which, but one, lived to grow up. He, unlike most farmers of the present day, made his own carts, plows, yokes, sleds, harrows, and mended his broken chains and harnesses, patched and shingled his buildings when needed, did his own and others' butchering in the fall of the year, and in fact, turned his hand to almost anything that was useful and needful.

His boys were not allowed to idle away their time in running over the fields with gun in hand to shoot the little birds that sang so sweetly upon the tree-tops, nor were they allowed to be off to the ponds a-fishing every day; but their lot was to assist on the farm. The stones were to be picked up that were in the top-dressing, so that the keen edge of the scythe should not be taken off; manure was to be hauled on to the fields, and the ground must be plowed and planted, and the boys must drop the corn and pumpkin seeds, and help in every department of farming operations. The girls were useful in-doors in assisting their good mother in cooking, washing and mending, making soap, carding, spinning and weaving; they also prepared the swine's food, and helped the boys to milk the cows, and fed the hens and chickens, brought in the eggs from the coop, and did not feel it above their dignity to take a rake in hand if there was a prospect of a shower to wet the new-made hay.

I am not going to say that my father's mode of farming was the best, but I do say that it would be well for modern farmers to imitate his example, by bringing up their children to be industrious, economical and useful, and then they can depend upon it that their boys will make farming profitable. It is a great fact that cannot be denied, that the young of the present age are brought up to cherish extravagant notions in relation to all matters of life, and thus it is the farmer is not able to lay up, or even to meet, his demands, for the reason that he tries to have his children indulged in the extravagances of the times. Young man, if you would succeed in farming or any other avocation, save that dime in the corner of your pocket-book, and not spend it for that vile stuff, tobacco, which is undermining your health as well as your purse; if you do not join the sons, show to the world that you are temperate in all things; dress neatly but not extravagantly, cultivate your moral nature, that you may reverence all that is good, and the consequences will be that man will praise, and God will bless you.

Let me say that I love farming—it is the joy of my life. I can hardly wait for the season of birds and flowers to come. What soul is not touched by the voice of the blue-bird and robin? If there is anything that will elevate our hearts to our Heavenly Father, it is the return of spring, with

its ten thousand melodious voices, which are ringing all about us, with one universal shout of praise to God.

I see that some of the contributors to the *Farmer* are opposed to the killing of the crow. They say he is our friend, because he destroys many grubs, &c., and the same arguments are used in favor of the robin. They forget to tell us that the crow destroys every robin's nest that he can lay hold on. The crow is so bold that he comes in my orchard close by the house and robs every bird's nest that comes to his view. Now which do the farmer the most good, the crow or the smaller birds? I leave it to your readers to decide. My views are, that everything that is made answers life's great purpose. One species of life answers for food for another. We see this to be true, and no reasonable man will deny it. Who will deny that it is unnatural for a cat to catch a mouse, or a crow a robin, or a robin a grub. If, then, they destroy one another for the purpose of sustaining life, why has not man a right to destroy them, in order to save his fruits and grains from their depredation? We must decide this question by taking into consideration the good and damage they do us, and acting accordingly.

Some six weeks ago, while examining my young apple trees, I found some caterpillars' nests. I took them and put them into a vial, and set it on the mantel-shelf, being about one foot from the stove-pipe. Some of them have since hatched, but not having any food, they have died. I infer from this circumstance that the requisite temperature to develop the apple tree buds into leaves hatches the caterpillar's eggs. It seems, then, that the apple tree leaves are the natural food of the caterpillar. Now, because that is so, shall we abandon our fruit trees to their use? God made the caterpillar as well as the crow and robin, and if it is right to destroy the one, why not the other?

As I have before said, we are governed by the necessity of the case. One man devotes his attention to the raising of fruits; the birds are his sworn enemies, and he is bound to exterminate them. Another cultivates the grains and grasses; he, consequently, is not troubled much with the birds, so he is willing to let them live. So it is as my copy reads, "Many men of many minds."

One word relative to patent manures. They, like patent medicines, claim to cure all, no matter how poor your land. A table-spoonful put in the hill will insure a good crop. No doubt there is fertilizing matter in these manures, but the question is, does it pay for the farmer to buy them at the prices now asked for them? I think not. It is one very important part of a farmer's business to make the manures that are to be used on his farm. Let him see to it, that there is a sufficient quantity of meadow or swamp mud by his pig-sty, so that he may replenish it when needed. Put some under the hen roost and in the barn cellar and under the cattle and horses. If he has no mud on the farm, use the best soil that he can spare, that is on the farm. If he lives near old ocean's shore, let him draw the kelp that comes ashore in some of those north-east storms that we are subject to, and spread it upon his grass lands, or compost it. There are good farmers in the town of Marshfield, and they know the value of kelp, I should judge, by the numbers drawing it off when it comes ashore.

The farmer needs very much to have access to agricultural reports, both State and national, and every town should have a town library, and they should be entitled to one or more volumes, so that every farmer can have access to them. I know that many farmers laugh at the idea of book farming, and say that they want something that is more practical. They forget that among a multitude of counsellors there is wisdom. I know that farmers can obtain much information by reading agricultural matter, and they are those who profit by it. Let me say, as I close, that the monthly *Farmer* is to me an indispensable household article, and I greet its monthly visits with great pleasure.

OTIS P. JOSSELYN.

Pembroke, Feb., 1862.

REMARKS.—Thank you, sir.

COWS VERSUS HORSES.

At a plowing match held on the estate of the Right Hon. Earl Ducie, Crummel Park, we noticed, says *Bell's Messenger*, a team of cows, engaged in plowing at one end of the field; and as they appeared to exact a tolerable amount of attention, we thought it worth while to make a note or two on the spot. The animals were polled cows in full milk, and belonged to Mr. John Evans, of Woodford, Gloucestershire, who is, we believe, a small enterprising farmer. Two of the cows were rather old; the hindmost one, the owner assured us, had been worked regularly during the last seven years, has had a calf every year, and one season was worked up to the day previous to calving. The middle cow was a three year old, and this was her second season, the owner putting his cows to the plow at two years old. Our readers must bear in mind that these cows were in full milk, being milked twice every day; on very hot days it was found necessary to milk them three times.

Mr. Evans assured us that the cows gave more and richer milk when they were regularly worked, and that the goods were larger in amount, as well as better in quality; to use his own words, when there was a less quantity of goods made, his wife would tell him that he had not worked the cows so much, which was invariably the fact. Our readers will, of course, imagine that the cows were, and ought to be, well fed; hay, oil-cake, bran and chaff, we were told, was the food given them during their working time. We give no opinion as to the policy of working dairy cows as above, leaving our readers to draw their own conclusions. We must say it was rather slow work, although the plowing was pretty well done, and there seemed no lack of strength or will on the part of the cows.

PURE BEES-WAX.—Messrs. STIMSON, VALENTINE & Co., 36 India Street, Boston, sent us a sample of refined bees-wax, the other day, which surpasses in clearness and purity any we have ever before seen. Those who desire wax for household or for grafting purposes, can obtain it of them of the best quality. They are, also, dealers in paints, oils and varnishes, and sell at moderate profits. Call and see them.

For the New England Farmer.

AGRICULTURE IN OUR COLLEGES.

MR. EDITOR:—In a former article I endeavored to show that agriculture could not be successfully taught in our common schools. In this communication I propose to offer a few reasons why I think it can not be successfully taught in our colleges. To be taught successfully, it must, in my opinion, be taught in the family and on the farm, or in farm schools provided expressly for the purpose.

Our colleges were established for the sole purpose of educating young men for the learned professions. All the college studies prove this, from the study of the dead languages to the higher branches of mathematics and metaphysics. They were designed to teach all the higher branches of science and art, and lay a solid foundation for future eminence and usefulness in the different professions. Thus far, they have done this, and done it well. They are still doing it faithfully and impartially, taking young men from all the walks of life, and training them for the higher fields of usefulness.

But our colleges cannot teach everything; and it is more than ought to be expected of them. They have enough to do to teach and explain the general principles of science and art, without attempting to teach the particular principles of scientific agriculture which is so foreign from their general object and instruction. They cannot, if they would, teach agriculture, and teach it well, because they have not the means of doing it. Agriculture is an art, as well as science, and it requires not only theoretical but practical instruction, such as can be given only on the farm and in the field. Our colleges cannot do this. They cannot go out into the fields and teach all the various branches of agriculture by example. They cannot bring together the young farmers in the State, nor can they reach, influence and benefit them. They cannot teach by precept and example. Every one at all acquainted with college life and studies, and with what is daily going on there, must be fully convinced that agriculture cannot be thoroughly taught there, without interfering with the college exercises and studies. Besides, college students engaged in the study of other languages, and of the higher and more obtruse branches of philosophy and mathematics, can have but little sympathy in common with the student in agriculture, because their tastes, their habits, their ideas, their intellectual improvements, are so different. There would be a great gulf between them on the subject of their studies, their views and feelings; and a small prospect of harmony in their daily intercourse. It is easy to see that our colleges, designed and instituted for literary purposes, are not the right place for the education of the young in agriculture. Crops, soils, manures, the rearing and feeding of animals, and the management of the dairy, cannot be conveniently or successfully taught there. These must be taught in the family and on the farm, or in farm schools established for the purpose, where everything may be taught by example.

Either agriculture does not need schools, or the right kind has not yet been established. Students in agriculture should be under the instruction of a teacher who is at once scientific and practical—

capable on the one hand of directing their studies, and on the other, of showing them the best samples of all kinds of farm-work, done by himself. A portion, at least, of his lectures, should be in the open field, with the hoe, spade, scythe or axe in hand. His language to his pupils should be, "This is the way to do the work; follow my example—do as I do." He should be able to do anything that is to be done on a farm, and to give a reason for its being done in the right way. He should explain the different kinds of crops, the modes of culture, the nature of soils, and point out the practical excellences and defects of farmers. All his instruction should be at once scientific and practical.

After all, the great body of young farmers must be educated, if educated at all, not so much by learned and scientific lectures, as by the example and practice of others, by reading agricultural books and papers, and by their own effort at self-improvement. Our State, county and town societies, as well as our farmers' clubs, have all the characteristics of a school of the highest order, in which all may be learners as well as teachers, where practice instead of theory, and facts instead of conjectures, are the best authority. This is the best system of agricultural education for us to adopt for the present, till we have the means of establishing farm schools in every county in the State.

JOHN GOLDSBURY.

Warwick, March, 1862.

For the New England Farmer.

"DISSEMINATION OF FOUL SEEDS."

MR. EDITOR:—Under the above heading, "O. K." calls for the views of your correspondents, suggesting remedies for this growing evil. The subject is an important one, and doubtless much improvement might be effected, but there are many difficulties in the way of such laws and regulations as your correspondent suggests, and I think each individual must depend mainly upon his own skill and care.

If our country were all under cultivation, like some European countries, we might exterminate almost any plant we chose; but with our large tracts of uncultivated and uncultivable land, which the owners do not, and cannot examine carefully once in five years, the case is quite different, because a few seeds ripened in some out-of-the-way corner are often sufficient to place a weed almost beyond the control of ordinary farmers.

In my opinion, the best remedy, aside from our own watchfulness, is to do all in our power to induce farmers to obtain some knowledge of botany, or in other words, to become so familiar with the plants growing in their own vicinity, that any new plant will attract notice immediately, and not be allowed to spread, until its character is ascertained. A familiarity with the appearance of different seeds is also necessary to enable the farmer to select that which is free from noxious weeds, and he should, as far as possible, deal with seedsmen who have this knowledge, and are honest enough to give him the benefit of it.

Much has been done, and much more may be done, by agricultural books and periodicals, by giving *illustrated* descriptions, including the seed of various weeds, especially such as are most likely to be diffused where they do not already exist.

There are several plants which I have reason to think are at present becoming too common in some sections, where they can be eradicated if attended to before spreading any farther, and I will give some description of them.

RUDBECKIA HIERTA.—This has been recently introduced in grass seed, and is sometimes called yellow daisy. It has quite a resemblance to the daisy, but the leaves are entire or nearly so, (that is, not notched or cut like the daisy,) and the petals of the flower are yellow, with a purple cone in the centre, in the form of an old-fashioned straw beehive. This has been removed to the garden by some, but should be extirpated from both garden and field, as it is becoming quite troublesome in some places.

CHICORY.—This plant, which is very common in the vicinity of Boston, I have never seen in the Western part of the State, until quite recently I found a single plant of it growing in a newly-seeded field, and my farm assistant told me that he saw such a plant in a similar situation on his father's farm. Evidently, these were introduced in grass seed, and judging from its appearance elsewhere, I think it cannot too soon be banished. "A stitch in time saves nine." This plant, before throwing up its seed stalk, has some resemblance to the dandelion, and when in flower, is easily known by the unequal length, notched edges, and pale blue color of its petals.

SPURRY.—This plant was also introduced with grass seed on my farm a few years since, and has given me considerable trouble. It bears some resemblance to a plant sometimes called "horsetail," but is much more succulent, and is an annual. The leaves are linear, thickened or fleshy, and grow in whorls. The flowers are white, and rather insignificant, and followed by a round seed capsule little more than an eighth of an inch in diameter. I believe this is sometimes called "pine weed," and although recommended by some to be grown for "turning under," is too dangerous to be admitted to our fields.

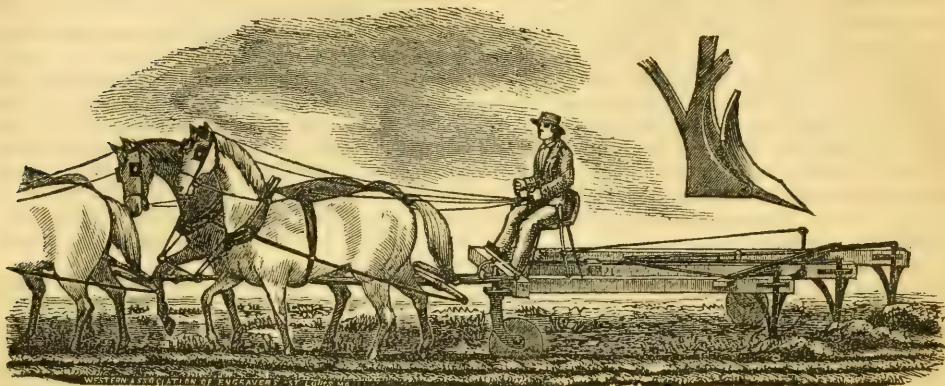
I neglected to state that Rudbeckia and Chicory are both perennial plants.

Ashfield, 1862.

WM. F. BASSETT.

GOOD FOR OXEN AS WELL AS HORSES.

At the New York State Agricultural Fair at Watertown, was a boy of sixteen, who controlled cattle with as much skill as Rarey controlled horses, and by using the same law, the law of kindness. He trained and handled six steers not two years old as easily as an experienced driver would a single pair in yoke, and yet he had no yoke nor rope; he did not speak to them in a loud voice, and only occasionally struck them a slight blow. A spectator describing his movements, says he would bring up a single pair as if yoked together, then two, and then three pairs; then he would mismatch them, putting odd ones together, and then bring them in a line like a platoon of soldiers; then he would train them around by twos and threes, or drop one and order him to a new place, all by a motion of his little whip. Being asked if he could manage eight as well as six, he said he could if his whip was a little longer. He tried, and succeeded with ease, impressing upon all who saw him, the great benefit of kindness and determination in the treatment of cattle.



SUTTER'S GANG PLOW.

This is a combination of from two to six, or more, plows, easily managed, and requiring only the attendance required for the single plow. We have never seen the implement itself, but have examined a model with much interest, and at the solicitation of the patentee, we publish the following description. The celebrity now attached to the steam plow arises from merits which are likewise due to "Sutter's Plow," and the latter has this advantage, that all farmers have their horses and oxen, and none have steam machines to plow with. The principal merits of the New Gang Plow are, that it will do the work of two to eight single plows, being capable of breaking up from four to twenty acres of land per day, requiring the attendance of but one man, saving both time and labor, and at the same time doing very thorough and superior work. By a very simple device, the angle of the shares can be instantly regulated by the attendant.

The height of the plow from the shares up to the beams is 21 inches; the length of the shortest beam is 6 ft. 2 in.; and every succeeding beam increases 16 inches. The plow rests in front on wheels, independent of each other, and capable of turning in every direction, just as the team moves. The wheels are placed in a line, parallel with the line of shares. On the top of the plow is a long seat for the driver, running parallel with the same, near which the mechanism is attached to work the shares, so as to lead the same in and out of the ground, and to regulate the position of the shares to cut the required depth of furrows. In case there should be some hard places in the field, the driver has only to move a little backwards on the seat, which will increase the pressure on the shares, forcing the same through the hard places, and gain thereby the required depth without altering the position of the shares.

Every description of shares can be used and applied to this Gang Plow, the same as in single

plows. The usual pressure of the single plow towards the land side is by this combination quite prevented, as the shares for single plows stand a few inches towards the land side, to keep them in the furrows, which naturally causes a great pressure and an unevenness of the ground, while the shares in Sutter's Gang Plow stand straight to the plow, saving thereby much of the draught power.

The teams may consist of from two to ten horses, or from two to six yoke of oxen, according to the size of the plow.

The plow has been proved in several cases, and its work was of the most satisfactory character.

JOSEPH SUTTER.

112 Pleasant Street, Boston.

For the New England Farmer.

BIRD MUSIC.

Now lay'ricks wake the merry morn,
Aloft on dewy wing;
The merle, in his noontide bower,
Makes woodland echoes ring;
The mavis wild, wi' many a note,
Sings dowsy day to rest;
In love and freedom they rejoice,
Wi' care nor thrall oppress.—BURNS.

Who has not felt a thrill of pleasure and delight while listening, on a warm spring morning, to the notes of the newly arrived bluebird, robin, or song-sparrow? Although these birds are inferior in power of song to many of the birds which visit us later in the season, yet as their music is the first which greets our ears after the silence of winter, it has a peculiar charm. During the winter the shrill cry of the blue jay, the caw of the crow, and the soft whistle of the chickadee, are pleasant to hear; but on the arrival of the spring birds the voices of the crow and jay seem harsh and discordant, and the little chickadee's tune sounds faint and monotonous. The flute-like notes of the bluebird and robin, and the clear twinkling sound of the sparrow's song, also lose much of their attractiveness when the wood thrushes, blackbirds, orioles, or golden robins, bobolinks, and warblers make their appearance.

The red-winged blackbird is one of our earliest, and, in my estimation, one of our best musicians. Although his song when alone is not remarkably musical, yet, when a large flock sing in concert, as they generally do in the early spring, there is a great richness in their lively and gushing melody. Flocks of these birds often sing during a rainy day in March or April, and their sweet chorus mingling with the rushing sound of the waters in the swollen streams, with the pattering of the rain-drops upon the roof, with the whispering of the warm south wind among the swelling buds of the trees and flowers, falls

"Upon the spirit like a dream
Of music on the hour of sleep."

No discordant notes are heard in that bird-choir, for all have correct, musical ears, and they appear to "sing with the heart," if not "with the understanding."

It is about the first of May; and as we wander forth on a calm evening between sunset and dark, sounds of melody fall upon our ears. They come from yonder wood-covered hill. All other sounds are hushed but the peeping of the frogs in the distant marsh, or the ringing sound of the soaring night-hawk's wings as he, at intervals, makes a sudden swoop towards his mate far beneath him. Hark! those melodious strains are heard again, and they seem like a voice from the spirit land! It is the song of the wood thrush. Heard when all nature is sinking to repose; when the floating clouds above the western horizon are tinged with purple, crimson and gold; when everything in the outward world is giving evidence that winter is over, and that another summer, with its fruits and flowers is just before us; the voice of this little songster has a charm, a fascination, which has been sought for but never found in the song of any other American bird.

What Isaac Walton says of the English nightingale's song may be applied with equal force to the music of the wood thrush, or American nightingale. "But the nightingale, another of my airy creatures, breathes such sweet, loud music out her instrumental throat, that it might make mankind to think that miracles had not ceased. He that at midnight, when the very laborer sleeps securely, should hear, as I have very often, the clear airs, the sweet accents, the natural rising and falling, the doubling and redoubling of her voice, might well be lifted above earth, and say,—*'Lord, what music hast thou provided for the saints in heaven, when Thou affordest bad men such music on earth!'*"

The cheerful voice of a larger species of the thrush family—the red mavis, or "brown thrasher," as he is frequently called—begins to be heard when the husbandman is preparing his grounds, or dropping the seed for a future crop. Perched upon the top of a tall tree near the field, he pours forth his song of love and gladness for the especial benefit, it would seem, of the farmer. What a happy world this would be, if the song of this, and every other feathered musician, brought to the mind of the listener thoughts of a still sweeter voice, the voice of a *loved* and chosen companion! If all could sing from the heart the words of that beautiful and well-known song, "Mary of Argyle."

While Nature is enrobing herself with a mantle of green, and decking her fair bosom with flowers,

while the air is filled with fragrance, with the hum of insects and with innumerable sounds of life and activity, the birds continue to arrive. Every day the winged orchestra receives new additions, until the band is full; and now the fields, groves and woodlands resound with silver-toned, enchanting harmony. The larks and bobolinks in yonder meadow sing as if they were in a perfect ecstasy of delight; the mellow notes of the golden robin and the loud voice of the woodpecker are heard in the orchard; the warblers, thrushes and other birds of song enliven the woods and groves with their joyous strains.

"Music awakes,
The native voice of undissembled joy;
And thick around the woodland hymns arise."

How much pleasure a person loses who cannot appreciate or take any interest in the music of the feathered choir; and how deficient in knowledge and refinement those individuals must be who consider that birds are more of a curse than blessing; and who, instead of endeavoring to increase their numbers, and their love of man, use various means to destroy these useful creatures, and drive them from human abodes!

What a void there would be in nature during the spring and summer; what a strange silence would brood over all the fair landscape, if the birds should cease to visit us! Their absence would be felt more than the loss of the flowers, with all their beauty and fragrance.

South Groton, April, 1862. S. L. WHITE.

For the New England Farmer.

THOROUGH-BRED HORSES.

In the May number of the *Farmer*, "J. W." inquires how to breed a thorough-bred horse? A thorough-bred horse is one whose pedigree can be traced without a flaw, in both lines, paternal and maternal, to Oriental blood; that is, to such horses as Godolphin, Darley, or Wellesley Arabian; or, it would be sufficient to entitle a horse to be called thorough-bred, if his pedigree could be traced clearly to some well-known racer, like Eclipse, or Flying Childers.

To raise a thorough-bred, then, it is necessary that both sire and dam be of pure unmixed blood. It does not follow because a horse is *imported*, that he is thorough-bred; it all depends upon the clearness of his pedigree. Nor can there be any such thing as a thorough-bred Morgan, or thorough-bred Black Hawk, for they all necessarily possess other strains of blood.

If "J. W." will call upon me, I will show him a thorough-bred, whose blood I can trace without a stain, through the space of over one hundred years.

Littleton, May, 1862. J. A. HARWOOD.

THE HORTICULTURIST.—The May number of this popular journal is embellished with a fine representation of *Rogers' Hybrid Grape*, No. 4, and its pages are crowded with useful and interesting horticultural matter. Its editors are capable and industrious, and are giving the work a popular character.

Never hire a man to do a piece of work, which you can do yourself.

THE DAM AT NORTH BILLERICA.

We offer no apology for continuing the history of the unjust usurpation of power in rebuilding the dam at North Billerica, and the loss and distress which it has caused to hundreds of the industrious farmers of the State. We have an unshaken faith in the justice of our people, and that future legislators will see how shamefully the elections have been corrupted by a combination of moneyed power, and the rights of a large number of our citizens trampled under foot. But this state of things cannot last. When the history of this oppression is better understood, the public voice will demand its suppression, and we trust compel the oppressors to compensate the farmers for the damage done to their property. We believe the determination to repeal the act of 1859-60, to remove thirty-three inches of the dam, was a foregone conclusion by the last Legislature, on the day that it first met. Such had been the influence exerted on the elections in every part of the State. We knew of this, as we were repeatedly notified, during the summer and fall, that one or more persons were visiting various portions of the State, and it was supposed were forestalling the public mind in this matter. The result justifies the supposition.

We recently gave one chapter in the early history of the controversy still going on between the owners of meadow land on Concord and Sudbury rivers, and now continue it a step or two farther. This dam was first erected about the year 1710. It was removed in 1722, by order of the Governor and Council, under the act establishing a "commission of sewers." This removal ends the first chapter in the history of the long controversy between these meadows and this dam.

In a second report of the Commissioners of Sewers, dated January, 1723, we learn that the dam was found built again, within two months after its removal. The Commissioners promptly appointed responsible men to repair to Billerica, "and if they found any mill-dam, to inquire who erected it, and to take notice of the height and dimensions of it, that His Excellency and Council might be truly informed of the matter of fact." This report was either never made, or has been lost. The existence of the new dam, however, is well established.

When the existence of the new dam was known to the meadow-owners, with the prompt energy for which the inhabitants of Concord valley have always been noted, they at once adopted measures to bring an action against Mr. Osgood, under an act passed in 1709. This act is entitled, "An act to prevent hedges, weirs, and other incumbrances, obstructing the passage of fish in rivers." It provides that whoever "obstructs the usual passage of fish in the spring, or proper sea-

sons of the year without approbation or allowance first had and obtained for the same, in manner as in and by this act is directed," shall be regarded as creating a "common nuisance," and declares that this "nuisance shall be demolished and pulled down, *not to be again repaired or amended*; and that on complaint made to the General Sessions of the Peace," &c.

We may remark in this connection, that large quantities of shad and alewives were formerly taken from this stream, even so far as twenty-five miles from the dam. The inhabitants of the towns bordering upon the river held their fishing privileges in high estimation, even within the memory of many persons who are now living. It was natural, therefore, that an obstruction which impeded the flow of the water, and prevented the natural course of the fish, should be regarded with aversion, by men with intelligence enough to know their rights, and with determination enough to assert them.

It is worthy of remark, that the meadow-owners complained of the first dam for two reasons; because it kept back the fish, and because it flowed back the water over their lands. Against the new dam they brought only the first complaint. We naturally infer, therefore, that while the new dam obstructed the passage of the fish, it was not high enough to cause the meadows to be overflowed. It is, therefore, reasonable to conclude that this dam was not so high as the first one.

In May, 1723, the town of Sudbury, at a legal town meeting, chose a committee, and empowered them to prefer a petition to the General Sessions of the Peace, "that the stoppage and obstructions upon Concord and Sudbury rivers may be removed, which is a hindrance to the free passage of the fish." This Committee prepared and presented a petition as they were directed, asserting that "they humbly conceive that the said dam is a nuisance, being so far from being lawfully and orderly made as that it was placed there in direct opposition to the order of the Commissions of Sewers."

In July of the same year, the selectmen of Concord, five in number, presented a petition to the Court of General Session, in conjunction with the petition from Sudbury. The following extract from this petition presents the cause of complaint in a clear and forcible manner. After alluding to the existence of the above mentioned "Nuisance Act," the petitioners say: "The ancient town of Concord hath ever, from the first settlement thereof, enjoyed the privilege and benefit of the fish coming up Concord River, without any incumbrance or obstruction, until sometime in or about the year 1709, at which time there was a mill dam erected across the said river, in the township of Billerica, in the county of Middlesex, to accommo-

date Christopher Osgood's mills, which, some time in the month of September, 1722, was pulled down and demolished by order of Commissions of Sewers, for the relief and benefit of the meadows and low lands above said dam; since which time, another dam hath been erected across said river, in, or near, the same place, where the former was made for the accommodation of Christopher Osgood's mills, without any order or leave from authority, the which dam almost wholly stops the natural and common course and passage of the fish up said river, which (if not obstructed as aforesaid by mill dam) would be of great advantage and benefit, not only unto the inhabitants of Concord, but also unto the inhabitants of several neighboring towns."

These petitions asked for "speedy relief by the removal and demolition of said obstruction." In the Superior Court of Sessions, in December, they were considered, together with the answer of Mr. Osgood, who was notified that they had been presented. "Both parties being fully heard, the Court considering thereof, *do declare the said dam to be a common nuisance*, and order that the Sheriff do demolish and pull down the same by the first day of April next following." From this decision Mr. Osgood appealed to the Superior Court of Judicature, and gave bonds to prosecute his appeal according to law. As the proceedings in this Court upon the appeal were both extended and interesting, we shall defer an account of them till another paper.

For the New England Farmer.

TWO EXPERIMENTS WITH POTATOES.

In the spring of the year 1860, I had a few bushels of coarse horse manure, and about a peck of small potatoes. None of the potatoes would weigh more than an ounce or two, each. I own a few acres of poor, sandy land, covered partly with June grass, and partly with shrub and white birch. About the last of May I loaded the manure, potatoes, a small horse-plow, a shovel and myself and an old one-horse wagon, and went about two miles to the land before described, and climbed to the top of the highest knoll where the sand was covered with a kind of woolly grass, spread the manure and dropped the potatoes about one foot apart, till I had dropped 40; parallel with this row, and three or four feet from it, I dropped another row, and the potatoes were so small, I made five rows 40 potatoes long—200 potatoes to the peck. Then I took the plow and turned a thin furrow each way on the potatoes, covering them under the sod about three inches, leaving the grass between the rows to do whatever it pleased till October. I then made them a visit, and took from under the sods four bushels of good-sized, good-looking and good-eating potatoes.

In 1861, I repeated the experiment with three little loads of manure, one bushel of potatoes and four times the quantity of ground.

Result:—10 bushels potatoes; 3 large pump-

kins, weight 90 pounds; 10 small ones; 2 large marrowfat squashes, weight 12 pounds, and lots of green ones.

Now, brother farmers, I am 73 years old, and if any of you dare compete with me in farming, let me know it.

DANIEL SPAULDING.

Fitzwilliam, N. H., April, 1862.

For the New England Farmer.

GYPSUM.

MR. EDITOR:—I noticed an article upon this subject under the heading of "Retrospective Notes," which appeared in the weekly issue of Nov. 30th. The writer says that farmers are "out at sea," and plaster is of no benefit in fixing ammonia, (according to Liebig,) in stables, unless mixed with four hundred times its weight of water. Farmers will never use plaster in a soluble condition, and there is no need of it, as I will soon show. "We have seen the fumes of a manure heap speedily arrested by sprinkling on half an ounce of strong sulphuric acid diluted with a pailful of water. Who will tell us of a better way?" Study Liebig's works thoroughly; put the practical part into active operation, and let the theoretical part alone; and work, think and study by the light of practical science, and you will have the right way. A part of plaster is sulphuric acid, and I should think it would have the same effect as when applied alone. Scatter plaster upon your stable floors, and from the great amount of urine voided by the cattle, much of the plaster will be dissolved, and after the manure is put upon the fields the plaster is being dissolved as wanted by every rain. It is only on the decomposition of nitrogen that ammonia is formed, and if plaster is mixed with manure, the sulphuric acid combines with the ammonia, and the lime with the carbonic acid, forming compounds which are not volatile, and consequently destitute of all smell.

Experiments by Dr. VOELCKER, upon a heap of manure, showed that the ammonia remained undiminished from November 3d to April 30th, while during the hot summer months all the most valuable matter had undergone diminution.

Take courage, brother farmers, put plaster with the manure, and when you have applied it to the land, the plaster will prove a faithful servant, as the rain descends. Liebig states that "the evident influence of gypsum upon the growth of grasses, the striking fertility and luxuriance of a meadow upon which it is strewed, depends only upon its fixing in the soil the ammonia of the atmosphere, which would otherwise be volatilized with the water which evaporates." Here is a wise provision of Nature; as the water evaporates it dissolves a portion of the plaster which retains the ammonia for the plant.

"In order to form a conception of the effect of gypsum, it may be sufficient to remark that 110 lbs. of gypsum fixes as much ammonia in the soil as 6880 lbs. of horse urine would yield to it. Water is absolutely necessary to effect the decomposition of the gypsum, on account of its difficult solubility, (one part of gypsum requires 400 parts of water for solution,) and also to assist in the absorption of the sulphate of ammonia by plants; hence it happens that the influence of gypsum is not observable on dry fields and meadows. The

ures of the new plan is the annual publication of the "aggregates" of the valuation of the several cities and towns in the Commonwealth, as returned by the assessors. The first of these interesting documents has recently made its appearance, and from it we copy the following valuable table :

COUNTIES.	Total number of Polls.	Total Tax on Polls.	Total Value of Personal Estate.	Total Value of Real Estate.	Total Tax for State, County, City and Town purposes, including Highway Tax.	Total Valuation, May 1, 1861.	Total number of Dwelling-houses	Total number of Horses.	Total number of Cows.	Total number of Sheep.	Total number of Acres of Land taxed in the County.
Barnstable.....	8,182	\$12,413.40	\$6,667.180	\$6,689.996	\$122.285.72	\$13,312.271*	6,098	2,184	3,501	1,012	157,356
Berkshire.....	12,734	20,669.05	7,809.004	17,876.950	531,372.01	24,186.033	8,436	7,223	20,370	42,485	545,102
Bristol.....	19,044	35,274.02	30,750.225	33,408.435	531,372.01	64,585.681	13,632	6,122	9,646	8,014	318,358
Dukes.....	1,160	1,740.00	1,327.227	1,317.109	17,768.01	2,844.453	822	363	759	3,014	45,528
Essex.....	37,679	59,463.66	31,640.901	52,905.124	703,746.13	82,855.115	22,888	7,803	13,533	27,585	365,405
Franklin.....	8,124	13,567.08	8,474.933	8,877.302	127,662.01	12,564.335	5,754	4,518	11,003	22,781	376,585
Hampton.....	12,392	23,130.73	14,960.79	6,714.446	225,016.58	27,128.962	8,486	6,513	11,003	18,554	329,978
Hampshire.....	8,945	14,960.79	6,015.647	12,002.402	133,660.22	18,018.049	6,201	5,280	10,092	18,554	329,978
Madison.....	5,025	70,746.38	38,922.006	101,406.215	1,217,003.00	140,410.221	32,725	15,120	24,507	1,179	487,612
Malden.....	1,403	2,104.00	2,490.418	701.713	64,638.65	3,201.161	827	8,455	460	1,290	11,692
Nantucket.....	1,403	2,104.00	2,490.418	701.713	64,638.65	3,201.161	827	8,455	460	1,290	11,692
Norfolk.....	16,442	20,768.99	20,768.798	19,270.315	222,751.88	28,628.079	10,776	6,328	8,459	3,348	246,811
Plymouth.....	10,127	27,519.44	109,112.836	175,038.232	2,252,711.68	284,140.158	20,115	5,067	671	4	8,306
Suffolk.....	38,871	66,039.29	23,393.393	49,990.689	62,623.72	73,535.482	23,535	14,974	36,258	7,577	910,579
Worcester.....	39,871	66,039.29	23,393.393	49,990.689	62,623.72	73,535.482	23,535	14,974	36,258	7,577	910,579
Aggregates.....	290,885	\$456,353.98	\$309,307.669	\$552,987.749	\$7,600,701.28	\$861,547.583	178,104	88,299	149,080	81,110	4,062,035

* The sum of \$62,165 assessed upon non-residents in the town of Harwich, included in this aggregate, does not appear in either of the columns of Personal or Real Estate values.

* The sum of \$62,165 assessed upon non-residents in the town of Haverhill, included in this aggregate, does not appear in either of the columns of Personal or Real Estate values.

difference between delicious food on one side and short commons on the other, and puts up a rail. They have already learned to leap a little, and the next day they improve and go a rail higher. Another rail is added, and the process is repeated until they become quite expert.

It is now a very busy season, but the farmer should not neglect his fences ; if rails are thrown down, replace them before cattle find it out ; keep fences high at all times ; and if the animals should actually break through, add rails enough to make the barrier entirely impregnable at once.

SUMMER CHICKENS.

Those who bring out chickens in April, or earlier, do it at the risk of making considerable loss, as that month is usually a cold, wet and windy one. When successful, however, they bring a high price, sometimes when marketed in July, as high as fifty cents per pound. This has prompted many to get broods as early as the last of March, and the first of April.

We copy the following article from the *London Cottage Gardener*, and think it worthy of attention by those who do not care to send chickens to market, but only to provide themselves with an annual stock.

There is an old proverb in some parts of the country that summer chickens never thrive. It runs thus in parts of Hampshire :

"Chicks that are hatched when there's making of hay, Will never grow up, but pine away."

All those who wish to rear poultry without much trouble choose the month of May for doing so. Sometimes a hen deserts a few days before hatching ; sometimes she dies upon it. If we listen to the above tradition there is no remedy. But we believe there is, and a simple one ; set more eggs, and be not deterred by fables. We go on hatching till August, and we are successful. The London market is only supplied by this process with the poultry for which it is so justly celebrated. Fowls of the same age can be had all the year round because the work of hatching never ceases. If we were to tell such of our readers as require instruction on the subject, that any expensive or very troublesome process was necessary, they might, perhaps, say, that of two troubles, they thought waiting was the less. But it is not so ; and we confess, it seems to us that the idea can only be supported by that undeniable argument, "I do not know how it is, but I know that it is so."

Another large class of poultry breeders say they do not believe in the saying ; but June is too late for chickens. Well, if you say it is too late, we say—prove it. The nights are shorter in June than in May ; the weather is warmer. Nearer to the winter you say ; but you have four months to the end of October, all good, growing, genial weather, and at that age, your chickens will stand anything. They are three weeks or a month later, that is all. It may be said there must be some foundation for the proverb ; the sun is too hot and scorching, and if chickens are entirely exposed to it, they will die. Put the rip, with the

MARAUDING CATTLE.—Cattle may be educated into almost anything.

A quiet cow may be converted into a skilful jumper in a single season. The first requisite for such training is short feed, resulting from overstocking. The second is low fences ; and the third, tempting crops of corn beyond these low fences. In the spring grass is usually good, and corn and other crops are small and uninviting ; but during some midsummer periods, when pasture is dried up, the process often begins. One or two rails are accidentally knocked or blown from the fence ; the quiet and orderly animals stretch their heads over to reach a morsel of the tall grass ; they throw down accidentally two or three more rails, and finally leap over. The owner drives them out as soon as they have learned the

hen into it, in a shady place, but near the sun. As in April you gladly turn it to the sun wherever you can find it, so in June turn it away. Let it be near covert for the chickens, shrubs, artichokes, pears, anything that produces shade and harbors insects. You will find your chickens live there a great part of the day, and always when the sun is most powerful. They find there the insects that have deserted the parched grass. Let them be well and frequently supplied with fresh and cool water. If you can do it, or have it done, you will find a great advantage in having a few pails of water scattered every evening on the ground they use in the day. It freshens it, and keeps it cool. To sum up; give your chickens shade, clean and cool water, with a run affording them covert; and we promise you, you shall say and prove that the prejudice against June chickens is a popular error.

For the New England Farmer.

RETROSPECTIVE NOTES.

"STEEPING BARLEY BEFORE SOWING."—The little item with this heading, on page 155 of the *Farmer* for April, and in the weekly issue of March 15th, may, it seems not improbable, lead some beginner in farming, or some one of limited experience, into expenditures of time, labor, and money, for which the returns will be very trifling indeed, and far short of the expectations which the last sentence of this quoted item would be likely to excite in farmers of large credulity and small experience. In this last sentence it is asserted that a writer in the *Homestead* thinks that the benefit or increase of crop, from steeping seed barley, before sowing, in a solution of copperas or blue vitriol, and then rolling it in plaster, would be as great as that which might be obtained from ten extra loads of manure per acre.

Seeing, then, that this item, quoted from the *Homestead*, is liable to mislead young and inexperienced farmers, and that it is objectionable for other reasons, it seems proper that some one of the members of the *New England Farmer Mutual Improvement Club* should utter a word of caution in regard to it, for the benefit of the younger and less experienced members. The caution needed, in this case, is just such a one as an old farmer, who had given up the care of his farm to his son, or to a tenant, might be supposed to address to either of these, if his opinion were asked in relation to it, and an inclination manifested to believe the statement made, and to treat some seed barley, or other seed, in accordance with the statement. Such a one, in such circumstances, would be likely to say that the recommendation in the *Homestead* was of little value, inasmuch as the amount of the copperas, or blue vitriol to be used, was not mentioned, nor the strength of the solution in which the seed was to be steeped. Another defect in this recommendation is, that the length of time during which the seed must be steeped, in order to produce the same effect as ten extra loads of manure, is not mentioned. "Be assured," he would say, "that if you are to get as much increase of crop from steeping your seed in a solution of copperas or blue vitriol, as you would get from ten extra loads of manure, you will have to be wondrously particular about the exact num-

ber of ounces or pounds of these salts to be put into your solution, as well as about the exact length of time during which the seed must remain in this marvel-working solution." Until the writer of the article referred to informs you and the public as to these points, so essential to success in making such an experiment, I would advise you to regard that writer's recommendation as one of the many inexact and untested opinions, whims, notions, or guesses as to what might be in certain circumstances, which are to be met with occasionally, not merely in common conversation, but also in print. I would give more for one experiment conducted with care and exactness, and accurately reported, than for all the loose, inexact observations, whims, suppositions, guesses and such like, which I might hear and read from June to January.

On page 183 of the April number the reader will find another item—"Soaking of Seeds." As to steeping seed in general, before sowing, it may be said that, except in the case of such seeds as those of the carrot and beet, there are scarcely any, for *field crops*, which can be steeped long enough to forward germination, *without some risk*. For sowing in *gardens*, seeds may be steeped long enough to forward germination and the growth of plants several days, without much risk; but in the case of the seed of *field crops*, there is always a risk from rains or something else happening to prevent the sowing of the seed at the proper stage, or without delay. And if there should be a delay of several days, the germinating process must either go on, and go too far, or must be arrested for want of moisture, in which last case the vitality of the seed—of some seeds at least—would almost certainly be destroyed. Then, again, in the case of a drouth, and the ground becoming exceedingly dry before the seed shall have been steeped long enough, there is a great risk—almost a certainty—that seed just commencing to sprout shall die, if put into ground so dry that it can find no moisture.

Upon the whole, then, it may be said, that the soaking of seeds for field crops is a process which requires the exercise of much good judgment, and a knowledge of the laws or conditions of germination, as without these, there is fully *more likelihood of damage* than of *advantage* from the process. Nevertheless, there is an advantage which may be secured by the adoption of this process of soaking seeds, especially when the steep is one which contains some highly fertilizing ingredients, as that mentioned on page 183 of the April number, in an item quoted from the *Michigan Farmer*. The celebrated German agricultural chemist, Liebig, in his "Letters on Modern Agriculture," states that no Chinese farmer ever sows or plants a seed before it has been soaked in some liquid manure, or in a solution of some manurial matter in water, and has begun to germinate; and that experience has taught the Chinese farmers that this operation tends not only to promote the more rapid and vigorous growth and development of plants, but also to protect the seed from the ravages of worms and insects.

A few items of our own experience in soaking seeds before sowing, may be of service, either as guidance, or as warnings, and with these we will leave this useful, but somewhat risky operation, to the consideration and the cautious trials of our

brother-readers of the *N. E. Farmer*. As to seeds that germinate slowly, such as the carrot and the beet, we have usually mixed them with sand or sandy loam, stirring them well together, keeping the mixture moist, and on the south side of the house, between a week and two weeks, and taking the box into the kitchen, or protecting it when the nights threatened to be cold. When carrot seed is prepared in this way, the mixture moistened with a solution of hen manure, and some gypsum added just before sowing, we get the carrots to start before the weeds, and so avoid one of the greatest troubles in raising this crop. If ever we should raise tobacco, we would treat this slow-sprouting seed in the same way, keeping it in moist sand, and in a warm place, two weeks before sowing it. Our trials in soaking corn have sometimes succeeded in giving the plants an earlier and more vigorous start; and in one instance, when the ground became exceedingly dry before the whole of the seed corn could be sprouted, the young sprouts died in the dry ground, and a second planting became necessary. MORE ANON.

CURIOUS PHENOMENON.

"How is it that you raise such large and nice onions?" I asked of an Iowa farmer, as I was sitting at table with him, and observing some on the table.

"Well," said he, "we sprout the seed with boiling water, and then plant it early and in good ground."

"Sprout the seed in boiling water?" I exclaimed, inquiringly. "What do you mean, sir, by that? Won't boiling water kill the seed?"

"Not at all," he replied; "but it will sprout them, in one minute's time."

"It will? It looks incredible," I replied, with surprise.

"Well, you try it," he replied, "when the time comes to plant, and you'll find it just as I tell you."

And, sure enough, when spring came, and my neighbor was planting his onion seed, being present, I said:

"Jewell, last winter, there was a man in Iowa told me that to pour boiling water on black onion seed would sprout it in one minute. Suppose you try it?"

"Very well," said he. And taking the teakettle from the stove, he poured the boiling water on the seed, which he had in a saucer. Looking closely at it for a moment, he exclaimed, "You have told rightly. Only look there."

I looked, and behold, the little sprouts about as large as horse hairs were shooting out of the opened ends of the seeds! He did not retain the water on the seed above three seconds, and in less than one-half minute after it was poured off, the sprouts were projecting from the seeds.

My Iowa friend assured me that this process would advance the growth of the onion two or three weeks beyond the ordinary method of planting without sprouting.

HOW HEALTH BRIGHTENS THINGS.—God has so knit the mind and body together, that they act and re-act upon each other. Who has not felt that the state of health gives a coloring to everything

that happens to him? One man, whose health is depressed, sees his own fireside, that used to burn so cheerily, only colored with gloom and sadness. Another, of a bright and joyous mind, in the full vigor of health, will go forth, and the very desert to that man's eye will rejoice, and the very wilderness to his view will blossom as the rose, and the saddest strains in nature will sound to him the most joyous and brilliant. A suferer goes out and looks on nature, and its roses all become thorns, its myrtles all look like briars, and the sweetest minstrelsy of the grove and forest sounds to him like a wild wailing minor running through all the sounds of nature.

For the New England Farmer.

HOW SHALL OUR SONS

BE BEST EDUCATED FOR THE OCCUPATION OF THE FARMER?

This is a question of deepest interest to the State, and to every individual in it; and well may it engross the attention of its Executive head. I do not claim to be much of a farmer myself, for I never felt that I had the *body for the work of a farm*—for to farm advantageously, demands energetic and continued labor. The farmer must rise with the lark—"he must keep his eyes right on, and his eye-lids right forward"—he must be intent on his business, and let other callings alone. Not that he should not understand enough of others, to guard against being imposed upon, but his ambition should ever be, to be an intelligent and successful farmer. To be this, he must know the nature of the soil he cultivates, and the uses to be made of the crops he grows. He must *soon learn* how to make both ends meet. Farming, good farming, is not a fancy business; but it should be entered upon as the *means of living*. The best farmers I have ever known, are those who have sprung up and matured on the farm—under the guidance of fathers, who were not ashamed to work. One of the greatest embarrassments to any pursuit, is feeling above one's business. The farmer-boy should ever feel that he is as good as any other, and no better, and never should feel above his business. He should never be ashamed of the dress that is best suited to his employment, but should stand up straight in it, and let others perceive that he feels himself equal to the best, and in no manner degraded by his occupation. Shall this kind of instruction be acquired on the farm, or at the school? I say on the farm. I would as soon think of making a boy a skilful navigator, without his ever going upon the water, as to make him a good farmer, without his *working upon the land*.

I have thought the Reform School at Westboro' might advantageously be converted into a school for instruction in agriculture. Here are *three hundred boys*, whose services can be controlled for a period of *seven years*, until they arrive at the age of twenty-one. Here is abundance of land, centrally situated, and if it be possible by school instruction to teach boys to be farmers, this, with suitable guides to their labor, and a suitable plan of operation, would seem to be the plan. The same may be said of the schools of reform, in our cities and counties. By such a plan of management, these institutions, instead of being a tax

and burden upon the community, would become a blessing.

Will it be said that boys who are fit subjects for such institutions, are less capable of learning than others? Far otherwise is the fact. Their physical ability is as great or greater, than the same number of any other class of boys; all they need is intelligent direction to their labor, and strict discipline. Let it be understood that they go there to serve *an apprenticeship at farming*, and not to do penance for offences against society; and let there be intelligent supervisors of the State farms, and they will not only become instructed, but they will soon earn their own support.

So. Danvers, 1862.

J. W. PROCTOR.

THE DAM AT NORTH BILLERICA.

With the brief remarks which follow, we shall close what we have to say, at present, in regard to this *legalized* oppression. We believe its supporters will live to see the day when they will have painful remembrances of their efforts to destroy the property of their fellow-citizens, for the sake of a little ungodly gain, and crush their best endeavors to obtain an honest and comfortable support. We do not hesitate to denounce it as a wicked oppression, because it nullifies and destroys the great rule of right left us by the Master,—that “Whatsoever ye would that men should do to you, do ye even so to them.” It is no justification to them to do wrong, because it is legalized by a Legislature whose judgment was corrupted by untimely and unfair representations. It is contended that slavery is legalized, and that therefore slavery is right; yet no man with a quick conscience would absolve himself from the crime of slavery, if all the world beside himself should justify it. But we proceed with the history.

When the new dam, erected by Mr. Osgood, across Concord river, at North Billerica, was condemned under the Nuisance Act, by the Inferior Court of Sessions, Mr. Osgood “appealed from the judgment of this Court to the next Court of Assizes, and General Jail delivery.” This Court was the Superior Court of Judicature. The appeal of Mr. Osgood was not tried in this Court. A new method was adopted for settling the controversy between the mill-owners and land-owners. A committee of three was appointed by the Court “to repair to Billerica as soon as conveniently may be, in order to view the mills and mill dam of said Christopher Osgood, in said town, to consider what method may be necessary or convenient to ease the said river of any obstructions and incumbrances, so as that there may be a free and sufficient passage or course for the fish up and down the said river, in the proper season thereof.” This committee was ordered to report their doings to the Court which appointed it.

The efforts of the meadow-owners to obtain redress for the overflowing of their lands by this

dam were successful. The first dam was removed by the authority of the Province. They were now engaged in new efforts to obtain a remedy for a grievance by which they were deprived of the natural benefits of the habits of a valuable fish. Of these benefits they were deprived by the new dam erected “without authority,” where the old one stood at Billerica. These efforts were successful, as will presently appear.

This committee reported that they were of opinion “that forty feet or thereabouts of the dam of the said Christopher Osgood be taken down from top to bottom, by or before the thirteenth day of March next, and to be left down or open until the thirteenth day of May next ensuing, and so annually from year to year, that the fish may freely go up and down.”

When the Court heard this report, the Sheriff of the county was ordered to attend the committee to Billerica, “in order to inquire and see whether said Christopher Osgood has eased Concord river of the obstructions and incumbrances, which he is complained of by the appellees, and whether he has performed what was proposed” by the last committee.

This Sheriff’s committee immediately attended to their duty, and soon reported that Mr. Osgood had pulled down his dam, as proposed by the first committee.

The Court took these reports into consideration, and after “a full hearing of both parties,” accepted them. Apparently, the difficulty was settled, the dam was required to be kept down two months in the year, and no more complaints against it would have been preferred, had Mr. Osgood acted in good faith. He, however, neglected the very next year to comply with the recommendation of the committee of investigation. The next spring two citizens of Concord visited Billerica and soon made the following affidavit before a Justice of the Peace: “They being at Mr. Christopher Osgood’s mill dam in Billerica, they saw his saw mill going, and observed that his mill dam was entirely up and standing from end to end; and that therefore they asked said Christopher Osgood why part of his mill dam was not pulled down, that so the fish might have a free passage up the river according to the committee’s report; and said Osgood answered that it was not pulled down, neither should it be this year, for he was not obliged to do it.”

The meadow owners immediately commenced new efforts for the establishment of their rights. The appeal of Mr. Osgood from the judgment of the Inferior Court was not tried in the Superior Court, but the question was settled in another manner, as has been indicated. This settlement was not regarded by Mr. Osgood. The land owners endeavored to have this appeal tried in the Superior Court of Judicature. This effort was

unavailing on account of a "law usage or custom." Mr. Osgood, however, seeing the determination of the men whom he was injuring, finally complied with the report of the committee sent out by the Superior Court, and kept his dam open two months in the spring. Soon after a general law of the Province was passed, requiring owners of mills to keep their dams in a condition to allow fish to run up and down freely in the spring. After the passage of this act, with the penalty for its violation, no further complaint was made against this dam until it passed into the hands of the Middlesex Canal Corporation, in 1794.

ON THE CIRCULATION OF SAP.

BY MR. CHARLES REESE, BALTIMORE, MD.

What is the true theory of the circulation of the sap in exogenous trees and plants?

There is scarcely a subject in the whole range of botanical science upon which there is such a diversity of opinion as upon this. All writers admit that it is of great importance, and yet no two precisely agree in the conclusions drawn from experiments upon it; and after a patient and careful examination of the best authors, we are left as much in the dark as ever.

The most popular theory of the day, and one which we find advocated by many wise and learned men, is that, at the fall of the leaf, the sap in the branches and trunk of the plant gradually descends to the roots, and lodges there until the return of spring, when, by some unexplained power, it is forced upward, filling all the branches, and causing the leaves to put forth again, and the tree to grow. A majority of men, influenced mainly by impressions received in childhood, and evidently without reflecting much upon the subject, believe this to be the truth, and rest there, without wishing to pursue the subject any further; whilst others, seeing great objections to this theory, have discarded it, and set forth a new one, with this as the main feature, viz.: That all the sap remaining in the tree in the autumn becomes changed into wood, and is thus finally disposed of; consequently, that which rises in the following spring is a new supply. In the "Encyclopedia Britannica"—article Botany, page 111—we find "Walker, Burnett, and others made incisions into the bark and wood of trees in spring and summer, and marked the points where the sap made its appearance. In this way, they endeavored to trace the course of the fluids in the stem. Walker concludes from his experiments that *the spring sap begins to flow at the root*, that it ascends slowly upwards, and bleeds successively as it ascends to the very extremity of the tree."

On the other hand, in "Carpenter's Vegetable Physiology," page 148, we have: "If a vine be growing on the outside of a hot-house, and a single shoot be trained within, in the midst of winter, the warmth to which the latter is exposed will cause its buds to swell and unfold themselves; whilst those on the outside are quite inactive. A demand for fluid will thus be occasioned along this particular branch; and this will be supplied by that existing in the vessels below. When these are emptied, they will be again supplied by

the parts below them; and thus the motion will be propagated to that division of the roots whose fibres are connected with those of the vegetating branch. These will absorb fluid for its support, whilst all the rest are completely at rest. In the spring of the year, when the cheerful rays of the sun call the whole of the buds into activity, the whole of the roots are similarly affected; and *that the sap begins to move in the upper branches before it commences ascending in the trunk* has been shown by experiment—notches having been cut at intervals, by which the period of its flow could be ascertained in each part."

When doctors disagree, &c., &c. Here we have testimony precisely opposite. Of course, both are right in their own estimation.

In the hope of finding the truth amongst the intelligent contributors who adorn your pages, I have been induced to make the inquiry at the head of this article. Will you give it a spare corner, and let us hear from them on the subject?

My attention was first called to it by witnessing the operation of striking cuttings of the vine, cut from the parent stem long after the sap had all "descended to the roots," or had been "changed into wood." As soon as the sun poured his flood of golden light upon them, and the little brown buds felt his genial warmth, they began to swell and give signs of a new life. In a short time, a thin, clear fluid began to trickle down their sides, and form a rim around the base of each, from which, in a few days more, a dozen white rootlets peeped forth, and pushed down into the earth, as if to bring up hidden treasures; and almost immediately the buds broke and came out into full leaf. Here was a new revelation to me, and I began to question my new teachers:

Whence had you this power? Your life was drawn from you last fall, and you have no great reservoir at your base, with powerful engines to send the crystal fluid through your veins at the approach of spring, and yet you grow almost as if still attached to the parent vine. Calling to mind the words of the poet about "sermons in stones, and books in the running brooks," &c., I sat down to reflect awhile. Surely, said I, here is food for thought. The fall of an apple led Sir Isaac Newton to the discovery of the laws of gravitation; and why may not as simple a physiological fact as the striking of a cutting lead to the true theory of the circulation of the sap?

From the teachings of the wisest and best man the world has ever known, I have been led to perceive that all things in the material world are the effects of spiritual causes. Wherever there is a germ of life, or an organization receptive of life, there is into that, through the medium of the light and heat of the outward sun, an influx from the Creator, a constant effort to bring forth all things good and beautiful; and the more I investigate, the more clearly I perceive this truth, that in all the works of Infinite Wisdom there are certain generals, composed of particulars, in each of which, although they may be the smallest into which microscopical science has yet been able to divide them, there are a thousand particulars, each as full and perfect in its character as the first. How true this is, every department of the vegetable kingdom testifies. But most clearly of all it is exemplified in the vine, that beautiful symbol of Divine truth. In each little rootlet, every tiny

seed, and in each delicate bud, there is a germ, which, under certain circumstances, will produce a full and perfect vine. Now, it appears to me this could not be the case, unless there was, besides the general circulation of the sap in the whole plant, a particular circulation in each of these parts belonging to it individually, and acting independently, although forming a part of the whole general circulation. In each of these separate individual circulations or systems dwells all the fulness of the vine. Each power, function, property and characteristic of the parent is there; and if, by some catastrophe, the entire vine, with the exception of one single bud, should be destroyed, from that a vine in every respect identical with the other could be raised.

The strawberry plant is another beautiful illustration of this principle. In the bud which slowly creeps out of the bosom of the parent, and grows until its own weight bends the long and slender stem to the earth, is the delicate framework of a new life. As soon as the eager root-lets establish a telegraphic communication with the soil, the new system is complete. The placenta is severed, and a new creation stands before us. But why multiply instances familiar to all. If this principle of separate circulation in the different parts is established, will it not lead us to a truer knowledge of the general system?

Now, I do not pretend to say that I have made one step in advance towards the attainment of that object; nor do I think I ever shall; but what I have to say may set others to thinking, and in the end truth may be evolved.

All plants, whether good and useful, or noxious and hurtful, are in the constant effort to reproduce their species, and, as this is their legitimate business in life, every faculty is directed to that object. Every bud, within which is the germ of a new life, is an especial object of maternal care and solicitude. Safely lodged at the base of the petiole, and securely wrapped in its tiny cradle, it is rocked to sleep by the gentle breezes, and fed every morning with the sparkling dewdrop. The purest and best portions of the elaborated sap, fresh from the laboratory of the leaf, is devoted to it, invigorating and strengthening every part, and each day adding just what is needed for its support.

At the close of the year, the change in the color, and finally the fall of the leaf, announces that its task has been completed; the organization of the new life is full and perfect, and the happy parent goes to her rest to prepare for new offspring with the new year.

Here is the corner-stone and key to the whole superstructure. Every bud so formed becomes the centre of a new system, and whether cut from the parent stem and planted alone, or conjoined to another vine, or left where it originally grew, has within itself the capacity to grow and impart to its offspring every peculiarity of form and color which characterized the parent vine. Now, let us inquire, if the sap is "all changed into wood" at the fall of the leaf, or is "evaporated," or "descends to the roots," what is this mysterious substance upon which the light and heat of the sun in spring has such an influence?

I have not been able to satisfy my mind fully upon this point; but so far as my experiments have gone, they have furnished me with conclu-

sive proof that the sap does not descend to the roots in the autumn, in greater quantities than it does during the growing season; but on the contrary, as soon as the fall of the leaf indicates that the new buds are perfected, the general circulation of the plant becomes more and more obstructed by congregations of albumen, starch, sugar, &c., in the alburnum and cellular tissues of the medullary rays, the spiral canals in the medullary sheath, and pith of the newly formed wood, and finally becomes *congealed* by the action of frost, so as to appear entirely motionless. This takes place first in the extremities, then in the lower parts of the branches, and sometimes throughout the trunk, when the plant may be said to pass into a state corresponding to that which plants of another kind find so necessary once in every twenty-four hours. During this period, cut a vine where you please, and you can not make it part with its sap. The duration of this sleep varies, of course, with different plants; with some, not more than one month elapses before they are awakened; with others, two, three, six months, regulated by the degrees of cold to which they are subjected, and the peculiar nature of the plant.

Now, as I have repeatedly observed—and I find my experiments confirmed by Carpenter and others—as the sap in the young and tender stems on the extremities was the first to become congealed and solid (if I may use the term) in the autumn, so it was the first to become liquified and active again in the spring. Now commences what I have called the particular circulation in each of the buds or new systems. The warm rays of the sun, acting upon the cellular tissue of the young bark around the bud, dissolve the congealed fluids, and they pass downwards, enter the medullary rays to the spiral vessels in the medullary sheath, through which they ascend, and flow outwards through the medullary rays again to the bark, thus forming a complete circle. Whilst this is going on, the congealed mass in the alburnum also feels the influence of the sun's rays, and becoming liquified, presses upon the thickened mass in the cells next below them, and they in their turn upon those adjoining them, and so on until a communication is opened with the roots, when instantly a new actor steps upon the stage, a stranger whom the schoolmen call *Endosmose*. The entire upper cells of the plant being now filled to repletion with thick, gummy matter, the general circulation goes on very slowly at first, until by means of this new agent, the delicate walls of the root-cells are opened, and in a thousand streams, the rains and melted snows of the past winter, holding in solution mineral ingredients necessary for the support of the plant, rush into the alburnum, converting starch into sugar, tempering, absorbing, and dispersing the obstructions in the sap-cells, and producing all over the plant that abundant flow which has no doubt given birth to the theory of the "ascent of the sap from the roots." Sometimes this goes on for weeks and months before the opening of the leaf and flower buds.

I have known these fluids to be circulating freely in a grape vine in February, and yet the leaves and blossoms not unfold before May. Well, now, suppose there was no descent of sap through the cellular tissues of the bark to the roots, no deposit of cambium on the exterior of the alburnum, what amount of sap, think you, would rise in two

months at the ordinary speed of ascension? Why, more than the whole vine would contain if it were composed entirely of sap.

It is during this period that new roots are formed very rapidly. The separation and distribution of the albuminous and starchy matters, caused by the endosmotic entrance of new fluids from the fruitful earth, furnish abundant material for these; and the delicate fibres now push out in great numbers, and preparations go on throughout the whole plant for the new work before it.

This is the reason why late fall or early spring planting of fruit trees is more successful than summer planting. As soon as the leaves appear, the whole energies of the plant are directed as before—first to the young and tender buds, next to the formation of new wood and roots, and lastly to the development of the luscious fruits. The circulation of the sap now goes on regularly and orderly, the general system supplying from its inexhaustible fountains support to thousand particular systems till the close of the season.

Now, sir, there may be errors here mixed up with some truth. To me, at least, it appears to be truth; but as we cannot trust to appearances I wish to have it tried in the great crucible of practice, by careful experiment. — *Gardener's Monthly.*

WASH FOR HARNESES.

Take Neat's Foot Oil, and Ivory, or Patent Black—the latter well pulverized, or to be made so before using. Mix thoroughly—adding the black until the oil is well colored, or quite black. In cool weather the oil should be warmed somewhat before mixing. With a sponge apply a light coat of the mixture—only what the leather will readily absorb, unless the harness is dry—which will be in from two hours, to a half or a whole day, depending upon the weather and previous condition of the leather—wash thoroughly with soap suds. In making the suds, use *good Castile soap and cold rain water*—(warm water should never be used on harness leather.) Apply the sponge. Rub off with buckskin. This will give the harness a nice, glossy surface, and the leather will retain a good color, and continue pliable for months. If it becomes soiled with mud or sweat, an application of soap and water, as above directed, (without oiling,) will be sufficient to give it a bright appearance.

Two applications of this oil and black mixture a year (or once every six months,) will be sufficient to keep harness, as ordinarily used, in good order. It may be necessary for livery men, and others who use harness constantly, to apply the oil oftener—but in most cases two oilings a year, and washing with suds when soiled, will keep a harness in good trim for sight and service. This process will pay a large dividend in extra service and durability, to say nothing of improved appearance. Alderman Baker assures us that the same, or a similar application is just the thing for carriage tops which are made of *top leather*. The only difference in treatment, that less oil should be used, or rather a lighter coating applied—and it should be washed off *before drying in*, top leather being thin, and much more penetrable than harness. Of course, the mixture would not answer for enamelled leather, of which some carriage tops are constructed.—*Exchange.*

For the New England Farmer.

AMONG THE GREEN MOUNTAINS.

The Weather—"Sugaring"—Farming—Snow Drifts—Thunder Showers—High Water—The Prospect—Sheep and Lambs—How Fed—Management of Stock—Mark of a Good Farmer.

MR. EDITOR:—It is Monday, the 5th day of May. The weather is fine, and really spring-like. The three short weeks of sugaring—all we have enjoyed the present season—are past, and about half the amount of sugar usually made, we have stored away as the "sweets" of our labor. Very little has been done yet at farming; the ground is wet and cold, and occasionally spotted with banks of drifted snow. The streams are now quite high, and the Passumpsic meadows, as seen from my window as I write, are well overflowed, the result of warm weather, rains and thunder showers, the latter of which visited us during the afternoon of Saturday last—being the first of the season.

Grass looks well, and the soil which has lain well protected beneath four or five feet of light snow, for nearly five months, without receiving a single draught of the needful by way of rains or showers, till about two weeks ago, is now well watered, and preparing to receive the seed ready and waiting to be bestowed upon it, with a promise of a liberal return.

The spring, previous to the middle of April, was dry and moderate, affording fine weather for sheep, and especially early lambs. I have one lot of 26 ewes, which have raised 38 lambs—24 of them being twins. The sheep are fed on hay, clover and herdsgrass, with an additional daily allowance of eight quarts of a mixture of oats and beans. (A good preventive of ticks.)

I do not allow my sheep, or stock of any kind, to leave the yard until they can make their living on grass; feeding fields during the spring, or even late in the fall, after the late rains begin to soften the sod and soil, is very injurious to the grass-roots, especially if the land is lately seeded; and the stock will do quite as well, safely enclosed in the yard, and fed on good hay—and such should always be reserved for spring feeding—with such additional *etceteras* as may be provided for them.

Stock of all kinds should receive extra care and keeping during the spring months. The "old coat" should be started while at the barn—the earlier, the better—by means of a few roots, or a little grain, in addition to a full allowance of good hay, that they may be all ready to feed and "grow fat," when turned to grass. I am better pleased with the term "spring fat," than "spring poor." The skeleton may be an object of interest, and perhaps profit to the anatomist; but to the agriculturist, or stock-grower, such an object moving within the enclosure of his barn-yard is of little interest, and of less profit. Our creatures should come out in the spring in good condition, exhibiting a healthy and thriving appearance; fleshier, if possible, than when they came to the barn in the fall; it speaks well for the farmer; it is a mark of a successful stock-grower, with whom *farming will pay!*

I. W. SANBORN.

Lyndon, Vt., May, 1862.

CHEAP SUMMER FEED FOR HOGS.—A correspondent of the *Homestead* gives the following as an economical manner of summer feeding hogs,

practiced by one of his neighbors. We have practiced this plan for many years, and find it an excellent one.

"A few rods of grass-plot convenient to the pen is reserved for this purpose, and is manured by the weekly suds from the wash-room. Commencing at one side of the plot, a large basket of the thick short grass is mowed each morning while the dew is on, and a part given to the swine at each feeding, three times a day. By the time the last portion of the grass is cut, the first is ready to be cut again, and in this way the ground is mowed over many times during the summer, while the grass is kept short, thick, tender and sweet. It keeps the hogs in a healthy growing condition—they are fed with as much as they will eat every day, and but little additional food is required besides the slops from the kitchen.

EXTRACTS AND REPLIES.

HOW WE CAUGHT THE PIG.

A drove of pigs came rooting their way into our village, the other day, and the neighbors generally selected one each, for their solitary pens. The drove had moved on but a short distance, when out jumped one of the new purchases, and threatened to join his late companions. The family, being without their head,—a laborer, gone to his work—were in great trouble. The pig was certainly lost. Drive him into the pen again! He faced square up to the simple neighbors, who tried it, with great obstinacy and sly dodges.

Could we catch him? He was slippery as an eel—would dart through a man's legs like an arrow. Finally, when we had left for a plan but about the boy's last resort—putting salt on his kinky tail—a smart mechanic brought out some corn and a new, strong, cotton clothes line. He made a noose as large as a table, and threw down some corn within it, and then stood off some distance with one end of the line in hand.

Of course, it was a hard job to make the pig see that corn, but when he "put his foot in it," jerk went the cord, and the pig was surprised by the fore leg. He flew around with great activity, while the long line was being drawn in, taking the legs from under some of his captors; but the chase was over and the pig secured.

Moral.—Make a pen about as you would for poultry, for a Brighton pig. If he gets out—get him in again.

W. D. B.

Concord, Mass.

A GOOD COW.

As several have given the results of products of cows and growth of calves, I will try my hand at it. My cow dropped her calf Jan. 30, 1861. I commenced saving milk, Feb. 5, 1861; from that time to Feb. 5, 1862, she being farrow, we made 366 lbs. of butter. We used a quart a day in the family. The skim milk was given to the calf two months, then one-half of it one month more, mixed with 75 cts. worth of fine feed made into porridge, and then grass, up to her eyes in clover. Since the calf came to the barn, she has had good hay and three cents' worth of waste of the flour mill, per day. The calf is now 15 months old, girths 5 ft. 3 in., and is 5 ft. 9 in. from roots of horns to rump.

The skim milk from April 3 to Oct. 27 was given to a pig one month old, weighing 14 lbs., and cost \$3.00. When dressed, Oct. 27, he weighed 302 lbs. The cow had good feed in summer and about two cents' worth of waste a day, and since she came to the barn, foddering three times a day of corn stocks or hay, and about four cents' worth of waste.

JOHN M. MERRILL.

Bristol, N. H., April 29, 1862.

PURE BLOOD POULTRY—BARLEY FOR SHEEP.

Presuming upon the acquaintance formed by a constant perusal of the monthly *Farmer*, I venture to trouble you or your correspondents with a question or two, which I would like answered in the monthly, as I do not see the weekly.

Will Mr. Ives, Buffington, Gates, or some other fowl-fancier, tell me how I can keep pure-blooded fowls year after year, otherwise than by breeding in-and-in, as it is called? Suppose I should procure, of Mr. Gates, eggs from pure blood Leghorn fowls, and upon trial like them, and wish to keep the stock pure; I cannot see how I am to do it, otherwise than by breeding in-and-in. No one else in the vicinity has them, and, of course, I cannot every year be at the trouble of hunting a cock from a distance; and I am told that a few years breeding in-and-in will spoil the stock. My neighbor spoiled his turkeys in that manner.

Is barley injurious to sheep? I can raise barley more easily than other grain, but am told it is not good for sheep.

J. C. SHATTUCK.

Marlboro', N. H., 1862.

TWIN LAMBS.

Having seen in the *Boston Journal* an account of 32 lambs raised from 20 ewes, by our enterprising townsman, C. F. Haskell, I wish to correct an error too common among our farmers, that is, that raising twins is profitable.

I cannot in too strong terms condemn the breeding as having a tendency to rapidly run down a flock of sheep. The tax of the ewe to grow two lambs is such as causes double the drain of the system, which proportionally shortens the length of life and consequent usefulness of a flock of sheep, besides the amount of wool grown is proportionally less. Not only so, but the size of sheep is from generation to generation diminished and will eventually run a flock down in this way: twins run into triplets—triplets into quadruples—a case of the latter recently come under my notice in this way: a ram, from a triplet ewe, was put to another triplet ewe, and the result was four lambs or quadruples. Nature discountenances this in cattle, when one of the twins is male and the other female, by rendering the female barren, or in other words a "Free Martin."

I would discourage the practice of saving twins for breeders; in so doing, the British have, together with judicious management, increased the weight of their sheep and cattle since 1630 over one hundred per cent. (See records of Smithfield market—McCulloch's Dictionary of Commerce.)

Stanstead, C. E.

GEO. BACHELDER.

ON TANNING SKINS.

I notice the inquiry of "A Reader" for a receipt for tanning skins. I can give him one that I have used to tan wild animals' skins; it is a simple pro-

cess. Take two parts of saltpetre and one of alum; pulverize finely, mix them and sprinkle evenly over the flesh side of the skin; then roll the skin tightly together, and let it remain a few days, according to the weather, then scrape the skin till it is soft and pliable. I have tanned skins in this way so that they would be as soft and white as buckskins.

A SUBSCRIBER.

Shelburne, Vt., 1862.

ANOTHER MODE.

"A Reader" wishes to know the mode of tanning coon and fox skins with the fur on. I will give him my mode of operation.

If the skin is green from the body, scrape all the flesh from it, then pulverize equal parts of saltpetre and alum and cover the flesh part of the skin with it: put the flesh in in such a manner as to hold the brine when dissolved, then lay it away in a cool place,—say the cellar—and let it lay four or six days; then cover the flesh part with soft soap, and wash off clean with water. Dry in the shade, roll and pull occasionally while drying; then roll and pull until soft and pliable.

Orange, Vt., 1862.

A TANNER.

ASPARAGUS ROOTS—CURRANT CUTTINGS.

Will asparagus plants from a bed ten years old do well to transplant to form a new bed, when younger plants cannot be obtained?

When should cuttings be taken from currants and gooseberries? P.

Orfordville, N. H., May 5.

REMARKS.—We know of no reason why asparagus roots ten years old should not be good for transplanting.

Gooseberry and currant cuttings should be cut before they start their leaves in the spring. They are so hardy, however, that they will probably live even if they have started a little.

STOCKING LAND WITH GRASS.

I have a piece of land which is self-stocked with white clover. I wish to know how it would do to sow timothy seed and roll it in? Should I get as good a crop as if I were to plow and stock anew?

Shelburne, Vt., 1862.

A SUBSCRIBER.

WOOL GROWING.—The Secretary of the Vermont State Agricultural Society, Daniel Needham, in his annual report, has the following remarks upon the important subject of wool growing:

The price of wool for the next few years, reasoning from analogy, must be high. The cotton crop will not be planted extensively at the South as it has been in years past; and if the blockade is not raised by the first of April next, in many States it will not be planted at all. Should the rebellion not be suppressed within another year, as very likely it may not be, very little of the cotton crop of 1861 will find its way to market for the next eighteen months; and when we consider that the people must be clothed; that the use of woollen fabrics during the present high price of cotton goods is much more economical; that the million of men in the field wear and destroy, in weight, a third more of clothing than in the peace-

ful avocations of life; that at the South all the carpets have been cut up into blankets and that very little of the worn out stock will be supplied until peace is restored—from the fact that the South has not even the raw material to replenish with—the whole seceding States not producing as much wool as the State of Ohio alone; it can be seen, that not only during the war, but at its close, when the million of men in the army return to their former employments, discard their military clothing, and dress as they were wont in broadcloth and doeskins, the price of wool must continue above the average price for the last five years. In time of war, the quality of wool is a matter of no small consequence. Vermont has limited herself to the production of the finest wools. But the wool most in demand now, and bringing the highest prices, is a coarser grade. The query may well be made, whether it will not be equally profitable for us to turn our attention to the production of a somewhat coarser staple, and at the same time furnish richer and higher priced mutton for the market.

For the New England Farmer.

THE MORRILL HORSE, DRACO.

This fine stallion, though possessing a world-wide reputation on account of his great speed, is so nearly up to the standard of perfection for a horse of general use, that he deserves a passing notice. He is black, with a slight orange tinge around the muzzle and under the flanks. Stands nearly 16 hands high, and weighs 1175 pounds. He has a powerful muscular system, and a countenance at once indicating intelligence and strong nervous sensibilities, coupled with calmness and docility. His form is perfect, and he has as good feet and limbs as can be given to a horse. In harness he moves with that ease and regularity which mark the real trotter, yet with such commanding strength as to give the rider an idea that he has a horse fit for any emergency. His blood is such as to warrant the belief that the popular reputation he bears as a stock horse is a real one.

Although his speed is not his most desirable excellence, it is a fact that he has trotted a full mile in public, in two minutes and thirty-one seconds, when only seven years old, and he has made a breeding season every year since he was two years old, and has never been trained at a track ten days at a time in his life.

It is not our purpose to write a eulogy on this horse. But seeing him advertised to make a season so near us as Cambridge, and his terms at the low price of \$25, we were induced to state these facts, so that our breeders may go and see him, and patronize him.

SIGMA.

Framingham, May 6, 1862.

REMARKS.—We have seen *Draco*, and are satisfied that the praise bestowed upon him by our correspondent is none too high. With an exquisite symmetry of body, he has limbs of wonderful muscular power, and in our judgment must possess extraordinary abilities of endurance, as well as speed. Mr. TUCKER, his owner, is an intelligent and upright man, and entitled to the confidence and patronage of the public.

For the New England Farmer.

REPORT ON PLOWS AND PLOWING.

At a meeting of the Concord Farmers' Club last winter, it was voted to invite plow-makers, and others interested, to meet at Concord some day early in spring, and give the farmers of the neighborhood a practical illustration of the good qualities of their plows. A committee was appointed to carry this vote into effect; and the 6th of May was finally fixed upon for the exhibition. On that day a numerous company of persons interested in the sale and use of plows assembled on the farm of Mr. J. Hurd, now leased by Mr. Elijah Wood. A committee of the club, consisting of MINOT PRATT, EDWIN HOSMER, E. E. BIGELOW, L. W. BEAN, HIRAM JONES, J. B. MOORE, ABIEL WHEELER and N. H. WARREN, was appointed to examine and report upon the plows and their performances. This committee have endeavored to perform the task assigned to them in an impartial manner. They felt that their business, for the time was, to know the plow, and its capacities, rather than the plow-maker. They do not claim infallibility of judgment, and may have erred in opinion, but they believe the following statement of the performances of the day is mainly correct.

The committee, in coming to their conclusions, confined their examinations chiefly to two points. The first, and most important, relates to the *quality of the work performed*, or the condition in which the plow leaves the soil; the second, to the amount of force necessary to produce the desired result, on the part of the plowman as well as of the team. In the latter respect there was greater difference than in the quality of the work, though in this there was considerable diversity. They would have the plow-maker give his attention first to the discovery of that form of the implement which will leave the field in the best condition for the use to which it is intended to devote it, and then to such modifications as will reduce the resistance as low as can be, without impairing the work. The trial took place on a rather stiff clayey loam, of as nearly even quality as could be found. There were eight plows tried.

The first tried was exhibited by Mr. G. H. MORSE, of Boston, Hurlbert's patent, with cast iron beam, No. 3. This did good work, but was heavy, and hard to hold, having a tendency to run out. The beam was thought by some too short for steadiness and uniformity of depth. The point had a too strong tendency downward, and the turn of the mould-board was too abrupt for ease of draft. To turn a furrow slice 8 inches deep by 14 inches wide, it required a force, as shown by the dynamometer, of 725 lbs.

Messrs. SMITH & FIELD, of Greenfield, Mass., tried their cylinder plow, Gibbs' patent, No. 2. It turned the sod over handsomely, with ease to the team. It was thought by some to hold hard, though it several times went without holding for nearly the whole length of the land plowed. The point is nearly straight with the shoe, and is made broad so as to cut under on the land side about an inch. The slope of the mould-board is unusually gradual, by which it is enabled to slide along through the soil with less resistance than any other plow on the field. Furrow 8 by 15 inches; force required, 475 lbs. Several of the committee thought this plow did not leave the soil in quite

so fine a condition as some others. It did its work in so quiet and gentle a manner as hardly to disturb the relative position of the particles of the sod. The mould-board did not appear wide enough for deep work, the loose dirt running over the top at times when plowing only 7½ inches deep. With the skim plow attached, its performance was not so good. The committee are under obligation to Mr. Smith, the exhibitor, for active and valuable assistance rendered them in many ways.

Mr. TIMOTHY B. HUSSEY, of North Berwick, Me., exhibited his No. 4 plow, with wooden beam. This was a well-made and apparently strong plow, and did its work well. The mould-board was rather low for deep plowing. Furrow 8 by 15 inches. Force required, 687 lbs. It runs steady and holds easy.

Mr. JOEL NOURSE, of Boston, exhibited his new iron beam Universal Plow, No. 4. This plow is light, simple, of beautiful form, holds easy, and did its work remarkably well. It is made entirely of iron, with the exception of the ends of the handles, which are of wood, as being more pleasant to take hold of. It was exhibited in an unfinished state, (being a new pattern,) and some slight changes are intended in its construction. Judging from its appearance to the eye, there seemed to be no sufficient reason for its requiring a greater force to move it than did the cylinder, unless it is made of softer iron, which would cause greater friction. It did its work well, both single and with the skim plow attached, leaving the surface in fine condition. Furrow 7½ by 14 inches. Force required 587 lbs. With skim plow attached, same depth and width of furrow, draft 725 lbs., making a difference of 138 lbs. No doubt the difference in power required between the single and the Michigan plow would vary considerably in different soils, being less in loose, sandy land, than where there is a stiff, rooty soil, as the skim plow has to cut through the toughest part of the sod.

Mr. J. S. DOE, of Boston, exhibited a level sand and side-hill plow, Doe's patent, which turned the sod well for a side-hill plow; but it appeared too complicated in its construction. And there seemed to be strong grounds for the opinion expressed, that it should have been invented in the ante-diluvian times, when, as we are told, "there were giants on the earth," or that the giants should have descended to the present time; for surely no common man could handle this plow all day, unless on large fields where there would be little turning. Furrow 8 by 14. Force required 725.

Messrs. WHEELER & GARFIELD, of Concord, Mass., exhibited a side-hill Michigan plow, of a new pattern, which performed good work, with apparent ease to the team; but, unfortunately, in consequence of a flaw in the iron, the beam broke before it was tried by the dynamometer, and so its comparative ease of draft could not be ascertained. The Committee were led to believe that the plow will prove a success.

Mr. J. B. MOORE, of Concord, put in an old Nourse plow, Eagle 20, which did excellent work, but it required a force of 750 lbs. to turn a furrow 8 by 15 inches.

Mr. J. HARRINGTON, of Concord, tried his Nourse plow, Eagle No. 2, flat, which laid the furrow over very flat. Furrow 8 by 13; force required, 625.

Several of the plows exhibited are furnished with various mould-boards, &c., easily changed, so as to adapt them to different qualities and conditions of soil. This enables the farmer to have a plow suited to all circumstances, at much less cost than would be necessary to supply himself with a separate plow for each sort of work.

For the Committee,

MINOT PRATT, *Chairman.*

For the New England Farmer.

PAINTING AND SHELTER FOR BUILDINGS.

I recently met with a statement, the purport of which was somewhat startling to me, viz.: That "it required from five to ten per cent. of the original cost of a house once in five or six years to paint it." This was more than I had generally supposed the cost of painting to be, but it set me to thinking upon the matter. It costs nearly double to keep an unsheltered house painted, that it does one that is sheltered. The force of the winds cause rain, hail and sleet to batter with great force upon an unsheltered house, and whether it be painted or not, does far more damage to it than if surrounded by houses, as in a city, or well protected by trees in the country. It is a prevailing opinion upon our sea-coast that the saltiness of the sea winds slacks the paint and causes it to come off much sooner than it would in localities remote from its influence. This may, in a small degree, be true. But I think in this case the general absence of protection to the buildings is more to be regarded than the saline action of the wind. Let us look at this question respecting the cost of painting and see if we can afford to do it.

If a plain two-story house of ordinary dimensions costs three thousand dollars, and put the estimated cost of painting at five per cent. on this outlay once in six years, we have an outlay of one hundred and fifty dollars every six years. As we are not in this estimate painting for the looks of things, but for economy, and only using paint to preserve the house from decay, we will see what the cost of covering the house will be at the outset. We will call the house thirty-two by forty feet, which is as large as can well be built for the price we have named; posts seventeen feet; roof three-fifths pitch. It will require about eighteen thousand of first quality shaved shingles for the walls, costing five and a half dollars per thousand, labor and nails added will make up the cost about one hundred and twenty-five dollars, or twenty-five dollars less than the cost of painting. If these estimates are correct, who is going to paint for the profit of it? Cut down, if you please, the cost of painting one-half of the above estimates, and how then stands the account? Paint once in six years will cost seventy-five dollars, and the shingles costing one hundred and twenty-five dollars. On the sides of a house they will last forty years.

Here we have a very simple question in arithmetic—paint for forty years, five hundred dollars, and shingles for same period one hundred and twenty-five dollars, or three hundred and seventy-five dollars less. If economy is our object, paint must go by the board, or some cheaper method must be resorted to. I should, by all means, keep windows and frames, doors and casing, corner-

boards and other trimmings, well painted, as it is very expensive replacing them. If I did not like the looks of a dingy, weather-beaten house, I would resort to some of the many washes made of lime as their basis. Any desired color can readily be had. Properly made, and well put on, they will last almost as long as paint.

In the beginning of this article I have alluded to the effects of shelter upon paint and buildings. No man who claims to be governed by economy, can overlook the fact that proper shelter for his buildings is of great importance.

Plant evergreen and other trees at proper distance from your buildings, (none less than thirty to forty feet,) they will last longer, and if painted it will save you fifty per cent. annually in that article. This is not all. Every one is aware that a house exposed to the full force of our New England winter winds is a very uncomfortable house to live in, and that the fires are continually crying out for more wood, and the household how cold it is. Place around such a house the protection I have spoken of, and how great the change! The wind is broken of its force, and greatly mollified in passing the barrier we have reared, so that, by the time it reaches the dwelling, this roaring, blustering monster is almost entirely shorn of its strength. If we are farmers, and have domestic animals under our care, could they speak, no doubt their first utterance would be of gratitude for our thoughtfulness for their welfare in shielding them, as well as ourselves, from the furious blasts of winter. Whether we paint or not paint, can we afford to have our buildings unprotected by trees, if exposed to the full force of the wind?

Dorchester, Mass.

O. K.

THE PYTHON AGAIN.—All hopes of hatching the eggs of the great serpent at the Zoological Gardens in London are now at an end. The frequent removals of the blanket in uncovering the eggs, and the occasional partial uncoiling of the snake, caused too numerous sudden changes of temperature for the proper development of the young. The effects of these disturbances attained a climax in the lengthened period of the snake's absence in shedding her skin, during which the eggs became completely cold. The necessity for their removal was not only apparent from the bad state they were in, but the impoverished condition of the python, diminished in bulk by at least one-third of her former dimensions, and her long absence from food, thirty-two weeks, naturally led to anxiety as to her ultimate safety, if she were allowed to hopelessly continue her sitting. The snake behaved spitefully during the operation.

THE RHODE ISLAND SOCIETY.—We have before us the "Transactions of the Rhode Island Society for the Encouragement of Domestic Industry, for the year 1861." It contains many interesting papers, and among them several containing reminiscences of leading inventors and mechanics who have taken an active part in the manufacturing interests in that State. There is, also, a paper on Hog Cholera, by Dr. EDWIN SNOW, of Providence. The pamphlet contains 150 pages, and is handsomely printed.

CULTURE OF BEES.

Within the six months just passed, we have noticed more said in our agricultural exchanges in relation to the culture of bees, than we have ever before seen in three times that period. When well informed on the subject, bee keeping is found to be not only a pleasant and attractive recreation, but a profitable one to the owner. A cheap, but tasty bee house, or a hive set here and there among the shrubbery about the house, has a wonderful home-like and interesting appearance. The curious habits of the bee, and the lusciousness of its products, have a charm for children which they never forget, if they have once visited the farm and enjoyed them.

A swarm soon becomes acquainted with those who have the care of them, and will cover the flowers of the garden or the farm in search of honey, and scarcely ever molest any one who is careful not to injure them. In picking raspberries and strawberries, it is rarely the case that any one is stung, though hundreds of bees may be visiting the blossoms for their rich treasures, at the same time.

We visited a bee master recently who informed us that he took *one hundred* pounds of honey from a single swarm, last fall. This swarm wintered well, while several others standing near were utterly ruined by mice.

The greatest drawback, however, in bee-keeping, is the destruction occasioned by the accumulation of their own breath and the exhalations of their bodies. These are much greater than many suppose, so that the stronger and more numerous the swarm is, the more danger there is to them from their own vapor. It is quite common to hear bee-keepers say, they have lost *their strongest and best swarm*, and the loss arises from the cause we have just stated, or, in other words, from *the want of proper ventilation*. Three-fourths of all the swarms lost, die from this cause.

For two years past we have used the *Maine State Bee Hive*, invented by Mr. R. S. TORREY, of Bangor, Me., and we have not only had no losses, but *have realized a profitable product from their labor*. The inventor seems to have been guided in his efforts by the habits of the bee in a state of nature, and has constructed for them a hive, which, in effect, scarcely varies from the hollow tree to which they usually resort. The ventilation is ample, and their *vapor is collected and led outside of the hive as fast as it is condensed*.

Another great merit of this hive is the cheap and simple mode of feeding the bees when a weak swarm requires it, or when transfers are made and honey and combs are taken from them. Near the top of the hive are several troughs, into which short tin tubes are inserted, through which honey or sugar and water are poured. The combs are

attached to the under side of these troughs, so that it is only a few inches from the centre of the mass of comb to the top of the troughs. A glass is inserted over the feeding places, which enables the operator to see all that is going on.

The hive is so constructed that mice cannot get into it, and it has a simple and efficacious moth-trap, which any one can understand and use,—and it costs nothing.

Mr. Torrey devotes his whole time to the culture of bees, and is an intelligent enthusiast in his profession. He began the hunting and study of bees in boyhood, and often explored the forests of Maine, bringing home with him rich treasures of honey and swarms of bees from their native woods. The construction of his hive has grown out of his ample experiences with these interesting insects, both in a wild and cultivated condition, and seems to us to afford the bee all the convenience and safety necessary for it to work with facility and success.

For the New England Farmer.

VALUE OF MUCK.

A subscriber inquires if it will pay to draw muck at this time of the year? (the winter.) In answer, I would say that it has always paid me to get muck at any season of the year, when I can get at it. A little preparation is necessary to make it very convenient to draw it in the winter, and when this is done, the winter is the very best time to draw it, as then we have plenty of leisure time. It is far easier loading, and we can draw larger loads, when the ground is frozen and covered with snow. I have been in the habit of drawing out from one to two hundred loads annually, and at all times of the year, when most convenient. Of late years I have drawn considerable in winter, for the reason that it does not cost as much to do it then, and I have more time to attend to it.

We usually have a period of dry weather between the finishing of haying and winter, when I have the muck thrown into heaps as near the hard ground as possible, where the water will leach out of it. By the time that sledding comes, it is considerably dry, and as soon as I begin to fodder cattle in the yard or stable I draw it into the yard, spreading a coat all over the whole surface, also put a quantity in a small room, built off from the stable for the purpose, which I use for bedding the cattle in the stable. As soon as that in the yard becomes covered with straw and manure, I draw in another coating and so keep doing all winter. In this manner the manure is pretty well mixed, and all thoroughly saturated with the liquid manure, thus saving a great deal that would otherwise drain off. The heaps which I leave until winter I cover with weeds, buckwheat straw, or any refuse matter to keep them from freezing. I have sometimes applied the clear muck, with marked benefit, but think it is better to compost it with other manure. It may be applied clear on slaty or gravelly land, at the rate of twenty-five or thirty loads to the acre, and the increase of the first crop will not be as large as it would from the

same amount of barn-yard manure,—but its effects will be *more* lasting.

In 1850, I put about forty loads on a slaty knoll of about one and a quarter acres, and it can be discerned to this day just how far it was applied, by the difference in the growth of any crop planted or sown on it. As far as my experience goes, I think I am justified in asserting that manure composed of one-half muck, and the rest barn-yard or stable manure, will last double the length of time when applied to slaty or gravelly land that clear manure will. I am not philosopher enough to explain why it is so, but that *it is true*, I have demonstrated to my own satisfaction by experiments for several years past. The cost of it is but a trifle, compared with other manure, the cartage being the only expense, and that can be reckoned but little if done in winter. I also keep the hopen well supplied with it, and generally make about three times the manure from that source that I should otherwise get. The hen manure I mix with the muck, about one bushel to three, and use it to put in the hill for corn, &c. Every spring and fall I draw six or eight loads and put in a pile at the back of the house, on which all the wash-water, brine and refuse of the kitchen is thrown, and about once in a month I shovel it over, and occasionally throw on a little slacked lime or plaster and ashes, and thus make a plenty of manure for the garden, which is superior to any other kind for that purpose.

I should like to say a great deal more on the subject, for, like some of our muck beds, it is exhaustless, but as space in the *Farmer* is precious, I will leave the subject to abler pens. At another time I will give the results of some experiments which I have been making the past six years.

Rensselaer, N. Y., 1862.

H.

SUBSTITUTE FOR LEAD PIPE.

We had occasion, a year or more ago, in an article on water pipes, to allude to the India Rubber pipe manufactured by the Boston Belting Company. We have nearly every week inquiries in regard to some needed substitute for lead pipe, which all are willing to concede is deleterious, but which is generally adopted even with the prejudices which exist against it.

The reader will find, in its proper place, an advertisement of this Semi-Elastic Pipe, and as the following letter from Mr. McBurney gives a fuller description of the article than the advertisement, we give it a place here:

MESSRS. EDITORS:—I would call attention to my patented "Substitute for Lead Pipe," advertised in your columns. It possesses every property requisite as a conduit of water in any and every place or position; unobjectionable in every way; is entirely free from any deleterious substance in its composition, and only needs to be known, to be universally used. It is, in fact, a real substitute for lead pipe. It may be used underground, or exposed in any way, and has been thoroughly tested in every position. It is not a hastily got up thing, nor was it produced at a mere thought. I experimented nearly five years, at various times, before a promising sample was produced. I then

tested it for three years before offering it for sale. "Apothecaries seldom take their own compounds," and "A prophet is not without honor," &c., but I have used my own pipe to conduct water for the use of my family and myself for over five years, and I have the certificates of immediate friends and neighbors, who have used it for one, two, and some three years, and they would not now willingly give it up. I have also two lines of 3-inch pipe, containing 7000 feet each, buried underground, which have been in use seven years, conducting water from a brook to a cistern to supply steam-boilers, which still continue good. It costs but very little more than lead pipe per running foot, and can be united by various simple and inexpensive methods.

CHAS. MCBURNEY.

Roxbury, Mass., March 27, 1862.

For the New England Farmer.

BAROMETERS.

MR. EDITOR:—A subscriber from Cornwall, Vt., inquires in the last week's *Farmer* whether "Barometers are to be depended upon at all times, or do they, like signs in dry weather, sometimes fail?" Now, if I knew the true address of "Subscriber," I would not trouble you, but write direct to him, and say that I have had a barometer some four years, and watched it with interest, by the directions of Jas. W. Queen, and I have come to the conclusion that they are really of very little practical use to the farmer, as all I can make of it is a sign of fair weather when it is rising, and a sign of rain when it is falling. Like all other signs, it fails very often, and generally, the indications precede the change of weather so short a time, that it can hardly be said to have foreknowledge, and that is all that would make it of any account. True, it will commence falling twenty-four hours before a storm, sometimes, and then it will frequently fall as much, and no storm follow, or it will begin its fall with the rain, simultaneously. Its indications are to be taken in combination with so many circumstances of wind, &c., that, like phrenology, none but experts can make anything of it. I have been pained to see articles from the pen of men of the wonderful influence of Henry Ward Beecher, or Simon Brown, which indicated that there would be no danger of any farmer getting his hay wet, if he had a barometer, as it would give him seasonable notice. But that is a mistake. I have known it to rise a tenth of an inch one day, and a rain storm commence before sunrise the next, and I consider it simply robbing the farmer of his hard-earned money to induce him to buy a barometer.

A. G. DEWEY.

Quechee, Vt., April 16, 1862.

REMARKS.—We have always been guarded in what we have said of the barometer. Have no recollection of ever saying "That there would be no danger of any farmer getting his hay wet if he had a barometer." We do not think of anything we have said, or written, in relation to the barometer, that we desire to recall. And yet, if we have said, or written any thing that should tend to deceive the farmer, or that should, in the slightest degree, misrepresent facts, it would give

us pain. While we think our correspondent has mistaken us in the matter, we sincerely thank him for the vigilance he exerts for the protection of the farmer.

We have plenty of evidence that the barometer is a valuable help to the farmer, and we believe valuable to the extent of several times its cost. While looking over our exchanges, we came across the following:

USE OF A BAROMETER IN FARMING.—John Underwood, Esq., of Aurelius, says the *Auburn Advertiser*, secured his entire crop of hay last summer by consulting the barometer. The morning on which he began cutting his hay, looked cloudy and felt like rain, still the barometer pointed unerringly to dry weather, and on the strength of that he sent in his Kirby. The hay was cut, cured and secured, before any rain made its appearance. But for the barometer, the hay would have been entirely ruined. Who doubts that the instrument paid for it itself by that one item of information?

An elderly gentleman, a progressive farmer, has just left us, who remarked, voluntarily, on seeing a barometer hanging in our room, "I use one of these, but I can't always rely upon it. But it pays for itself every year, and I should not think of parting with it." We consider this a fair judgment. The instrument is not infallible, at least, not in our present knowledge of it, and yet, may be such an indicator as to save the farmer many times its cost.

EXTRACTS AND REPLIES.

LICE ON CATTLE—CATTLE CHEWING BONES, &c.

I wish to inquire through your columns if any of your numerous readers can inform me of a safe and certain way of killing lice on cattle. I have fifteen head, all of which are more or less afflicted with them.

I have tried several remedies, none of which have proved satisfactory. Some are not effectual in killing *all* the lice; others it is nearly impossible to apply extensively enough to accomplish the object desired, and still others would kill both animal and louse.

What we want is, a remedy that is safe, certain and practicable.

My cattle, also, have a habit of gnawing sticks, boards, chips, and, in particular, bones, and pieces of leather, when they can find them. What is the cause? and cure?

Laconia, N. H., 1862.

YEOMAN.

REMARKS.—A judicious use of the mercurial ointment, called unguentum, will certainly destroy the lice, and will not endanger the health of the animals. It must be used sparingly, and patiently rubbed down to the skin. For some days after its application the cattle should not be exposed to storms, or become chilled. Farmers do not examine their stock sufficiently often. If they did, and would apply a little oil or grease when vermin first make their appearance, they would seldom find cause of complaint.

We have said about all we can, in former numbers of the *Farmer*, about cattle gnawing bones. It is because they feel the need of something they do not get. Give them a little bone-dust. If you cannot get that ground in a mill, dry a few bones and reduce them as fine as you can with sledge or hammer, and feed to them. Give them access to wood ashes, to the bare ground, to salt, and to as much good hay, water and grain as they need, and they will be quite likely to cease chewing bones and old leather.

TANNING SKINS.

While on a visit to my friends at Lempster, N. H., your interesting and valuable sheet of May 3 was carefully perused by me. I candidly confess I was much gratified that a paper could be so arranged as to convey to all classes reading matter of the first importance, not only to the farmer, but mechanic, merchant, men of leisure and of study, questions on various topics, calculated to interest the mind of its readers in morals, and science of every kind.

A receipt is asked for by one of its readers for a tanning for skins, and retain the fur.

Receipt No. 1.—Take 1 lb. sal soda, 1 oz. copperas, 4 oz. sulphuric acid, dissolve in 2 quarts of warm soft water.

No. 2.—1 gallon lye, 1 oz. sugar of lead, 1 oz. copperas, 1 oz. prussiate of potash, dissolve in 2 gallons soft warm water.

Apply to the flesh side, No. 1, from 5 to 10 minutes; No. 2, twice as long, according to the thickness of the skin or pelt.

TO CURE SCRATCHES ON HORSES.

Take 1 lb. mutton tallow, 2 oz. beeswax, 1 oz. calomel, simmer them together, then wash the animal on the affected part with castile soap, after applying a little weak lye; this has proved almost a universal remedy.

The above receipts may prove of some benefit to your many readers. One of my relatives, Gorham Pollard, Esq., of East Lempster, has been a subscriber to your paper, for some seven years; he says he finds as correct, early, and late reading news as in any publication extant.

Lempster, N. H., 1862.

BARREN GRAPE VINES.

I have two grape vines that blossom imperfect blossoms. How are they to be treated?

REMARKS.—Dig them up and replace them with fruitful plants. They are lacking the pistil, or female organ of the blossom, and can never be made productive.

TRAINING COLTS.—Lambert Maynard, owner of "Trotting Childers," who has had much experience in raising and training colts, states that "his colts are all broken to the harness before they are a year old, or as he more properly expressed it, educated. He rarely, if ever, uses a whip. As to its injuring them to use them so young, he remarks that he never exercises them so hard as they exercise themselves when alone."

For the New England Farmer.

DOES FARMING PAY?

If, as Sir Humphrey Davy says, "Agriculture is an art to which we owe our means of subsistence," then the above question, from one point of view, is the most absurd one which can be imagined. For, if it pays to keep body and soul together, it certainly pays to provide the food by which we are enabled to perform this daily miracle. If all the inhabitants of the earth should to-day resolve not to eat or drink anything which is produced by agriculture, or earth-working, how long would it be before famine and starvation would overtake them? They might possibly exist one, two or three years on the flesh of wild animals and birds, on fish, and the fruits which grow spontaneously, but when these kinds of food became scarce, as they would very soon, in some localities, what would they do? They must either perish with hunger, or return to the cultivation of the ground. If those who pretend to consider farming an unprofitable business, and are inclined to look down upon the poor earth-worker, would try to live and "keep house" entirely independent of the farmers' labors, it would not be many months before their tune would be changed from a major to a minor key.

Agriculture is the art which sustains human life; it must therefore be profitable to every individual whose life is not devoted to evil doing, in which case existence itself is more of a curse than blessing. But is the farming business profitable in a pecuniary sense? This is a question of much importance, but not so great as many others which might be proposed concerning the farmer's occupation. Facts prove that with the same amount of capital, the same amount of exertion, energy, patience, wisdom and knowledge, farming is as good a business by which to make money as any other. But in this, as in every other pursuit, some persons will become wealthy, while others, with equal advantages, will come to poverty. There are two men within the circle of my acquaintance who are an illustration of the truth of this assertion. One of these men commenced farming with a farm worth \$2500, with \$1000 at interest, but in a few years he succeeded in getting rid of the whole of his property, by ignorance and indolence. The other man bought a farm worth \$4000, and was in debt \$1600. In four years he made enough, by hard labor upon the farm, to pay all the debt, and is now a rich man. There are others with whom I am acquainted, who have acquired a handsome property by farming, and others still, who have remained poor, or have become so while engaged in the same business. But in every instance which I can call to mind, the degree of success in acquiring property by farming, has been in proportion to the amount of determination, industry, economy, good judgment and knowledge which has been manifested in the undertaking; and it is just so in all kinds of business.

I think it may be laid down as a rule, that success in amassing wealth depends not so much on the kind of employment which a person may be engaged in, as upon certain qualities of the mind, with which some individuals are much more largely endowed than others. Phrenologists say, that a large bump of acquisitiveness, with a proper

combination of some of the other organs of the mind, will enable a man to become rich in circumstances wherein others, who have not the organization, will soon become candidates for the almshouse.

I do not consider that a money-making character is one to be coveted, for very frequently, the possessors of such a character have faculties for nothing else but hoarding up treasures of gold and silver. There are other objects of life, the pursuit of which confer far greater and more lasting happiness upon the individual and the world, than the mere accumulation of dollars and cents, although this is important in its place.

South Groton, 1862.

S. L. WHITE.

For the New England Farmer.

HOW IS THE WORLD TO BE FED?

BY JUDGE FRENCH.

It seems to be agreed among those who know most about the matter, that the Union army now in actual service, exclusive of wounded and discharged soldiers, and those held as prisoners by the rebels, exceeds a half million of men. The most of these are from the classes of laboring men, and a very large proportion of them from the farms. The rebel army numbers probably two-thirds as many, comprising, in the language of Tom Moore,

"Christians, Mohawks, Democrats and all
From the rude wigwam to the Congress-Hall,
From man the savage, whether slaved or free,
To man the civilized, less tamed than he."

Although the Southern army is not composed so exclusively of working men as the Northern, yet the effect of raising it is probably to disturb the system of agricultural labor more than it is disturbed by the departure of our own volunteers. The white men are away from their plantations, and the slaves, if they remain, are of course idle and reckless. Freemen of all classes have been forced into the ranks, leaving their business, whatever it might be, to destruction. Slaves have been taken under military requisition, wherever they could be made useful, and set to labor on the fortifications, and even to work the guns. Besides this, in all Virginia, all along the coast, in all the region where either army has encamped, or near where it has marched, all is barren as a desert. No man plows or plants where he has no assurance that he can gather his harvest, and we can hardly suppose that much provision for the future can have been made, anywhere in the Southern States.

Who then is to feed this country, with all the South running riot and destroying her own substance; with nearly a million of men in arms, consuming wastefully the necessities of life, and with agriculture thus deprived of so large a portion of her labor? We are not of the croaking kind, and we have great faith in the productive capacity of

the great West, yet we know that none of the staple crops, of corn, wheat or roots used for food, are spontaneous, and therefore that the amount raised the present year must fall vastly short of the usual product. No doubt, the fiat of the rebel Congress and Governors, by which planters have been forbidden to raise more than a limited amount of cotton, will increase the product of corn in some localities, yet this can by no means compensate for the wide-spread desolation brought upon their land by this wicked rebellion.

We have daily accounts even now of the vast quantities of wheat and corn in store at the West. Only a few days ago, an article went the rounds of the papers containing calculations as to the comparative cheapness of coal and Indian corn *as fuel!* and we have before us now, a paper in which it is demonstrated by a Western farmer, that it is cheaper to feed out corn to sheep, than to sell it at ten cents a bushel, because it costs forty cents a bushel to transport it from the far West to New York, whereas forty cents worth of wood can be sent there for half a cent.

Such statements must seem to readers in the Old World like fairy tales. Indeed, the stories of Sindbad, the sailor, are hardly more wonderful than these accounts of the wealth of our country in corn; and if we should add to this, a history of a part of the country where it is almost unsafe to dig a hole in the ground, lest *oil* should spout up and drown you before you could get out of the way, we ought hardly to expect to be believed!

With all allowance, however, for Nature's prodigality, we venture to predict in the course of next winter much suffering for want of food in this country. The North and West can feed themselves, and will have a surplus for those who can buy. The insane course of the South, in destroying her cotton and tobacco, and the general disorganization of all her business, will render it impossible for her to buy. If we desired to humiliate the planters of the South, and render them powerless for years, we could do it in no way so effectually as to make them poor, for a man in debt, a large family, white or black, dependent on him for daily bread, with no means to supply their wants, is a pitiable object, and none the less so, if his own folly has brought his sufferings upon him.

The cotton planters are always in debt to about the amount of one crop. This rebellion found them in that condition. The crop which should have paid that debt is wasted and burned, and no other crop is growing to replace it. Their substance is dissipated, their labor disorganized, their currency ruined, their debts are overwhelming. A national bankrupt act will, by and by, pay their debts, and Northern men will lose the amount, but then the planters will have neither money nor credit, even if land and slaves remain. The question is

not, now, however, as to the remote future, but how is the South to be fed next winter? We say it in no spirit of boasting, but we believe that Northern charity will be invoked to their aid. There may be food enough in the South even, for all. There was food enough in Ireland, when millions were starving, to feed her whole population, but it was sold to those who had money wherewith to buy, and not distributed, with the even hand of charity, to all.

So must it be at the South. The half million of men in arms or otherwise, concerned there in this rebellion, discharged utterly destitute, from the ranks of the army, and from labor on the public works—how are they and their families to be fed?

With their farms well tilled by the boys who have staid at home, and their purses well filled with the wages so nobly earned in their country's service, our soldiers will find their homes set in order for their return, but desolation and poverty must meet the returning rebels.

It is idle to think of finding a market at the South, as our Northern traders are finding at Nashville, where everything is wanted, but there is nothing to pay with but confederate scrip. We should give them corn for cotton, but these fire-worshippers have sacrificed their King to their new Moloch, and will have little cotton to spare, so that we can do little for them in the way of trade.

How much surplus food this country has heretofore produced, nobody will ever know. We have supplied ourselves and our animals, and all foreign demand, and the granaries of the West are yet full. It is stated in a paper of May 10th that "over 2,000,000 bushels of grain arrived at Buffalo between Friday night and Monday morning last. It was the largest grain fleet that ever arrived at that port." This quantity would supply an army of half a million men with nearly a barrel of flour each! The accounts from England thus far are not encouraging for their growing crop of wheat, and they will probably draw on us for a large amount.

The prospect, on the whole, is, that somebody will want all that we can raise upon our farms. If the South are in want, they will look in vain across the sea to their sympathizing friends for succor. The charity of the British government, which would gladly have seen this rebellion prosper till it divided into two feeble rival nations the great republic of the West, will grow cold towards defeated rebels, and we shall be sneeringly told to feed our citizens, now that we have conquered them. We believe that day will come, before another year, when the North will respond as nobly to the call of the South for bread, as she responded to the call of liberty and law, to arm in their

defence; and the world will see that we are as ready and as able to feed the hungry, even in the States now in rebellion, as we are to strike down treason and to defend the right.

For the New England Farmer.

LITTLE THINGS:

OR, A WALK IN MY GARDEN.

It is said by some one of Peter the Great, that "nothing is little to a great man." The mind is exhausted by infinity when it examines a pebble, as when it explores a world. Much of our success in life depends upon the observance of little things. The teacher who would be successful in his calling, must be critical in everything. The farmer who suffers little things to pass unnoticed about his premises, is sure to be an unsuccessful farmer. I was meditating upon these things, while walking in my garden this morning over snow-banks ten feet high, and looking at the tops of my

PLUM TREES.

The present winter has been very destructive to the smaller trees and shrubbery in this State. It was so last winter. The labors and hopes of many were in ruins as spring approached. The idea of low dwarf pear trees, in this vicinity, is out of the question. They are stripped to pieces unless tied up in the most careful manner. Had I attended to this little duty, I might possibly have saved them. While looking at the prospect before me, one of my boys joined me, and wanted to inquire about the poisonous properties of the shrub known as

DOG-WOOD.

He said that he once had a couple of young deer, and at a certain time he gave them some branches of dog-wood to browse, from the effects of which they died. I have since been told that this shrub is poisonous to most animals. Is this fact generally known?

THE REBELLION.

There is one little thing to be thought of in regard to the course the South will take after the rebellion is crushed. How will they act? I think that if they cannot do quite as well as the North, they must do as well as they can. It reminds me of an old colored man who once lived in Pembroke, N. H., and who was known by the name of Eben. It happened once on a time that his wife got intoxicated, and laid down by the fence in the road where many people were passing by. Eben felt a little mortified, and tried to make her rise up, which she was not inclined to do. "Git up," said he. "Git up, and 'have yourself. If you cannot 'have as well as I do, 'have yourself as well as you can."

N. T. T.

Bethel, Me., April 12, 1862.

WARTS ON CATTLE.—A correspondent of the *Genesee Farmer* gives the following remedy for warts on cattle: Slake a piece of lime the size of a hen's egg, add four table-spoonfuls of soft soap, stir the same until well mixed. Apply the same to the warts. They will disappear in a few days, and the skin become smooth.

For the New England Farmer.

ABOUT PEARS.

Many cultivators of fruit, in this part of the country, as I learn from conversation with them, have become somewhat discouraged in their attempts to raise pears. It really seems to me, that, for a period of several years, the winters, with the exception of the one just now past, have been unusually severe for pear trees, in common with some other fruits. I commenced the cultivation of fruit some twenty years ago, and since that time have tried about seventy-five different varieties of the pear, making out my lists from the recommendations of distinguished cultivators, horticultural societies and the pomological Congress. Of that number—very small it is too, when compared with the number under cultivation by such men as Mr. Wilder, Mr. Hovey, Mr. Barry, and many other amateurs—the varieties upon which a moderate share of reliance can be placed, for people hereabouts to cultivate, are, indeed, "like angels' visits, few and far between."

I have been cherishing the hope—delusion, as some of our good people about here would probably call it—of finding out some few varieties that can be successfully cultivated, away up here in New Hampshire, among the rocks and hills; for I have never had a doubt but there are such varieties, and if nothing comes of my own attempts, I hope some more fortunate worshipper at the shrine of Pomona will find the desired ones, and, "when found, make a note of it." I have some crude notions of my own—vagaries, if that word suits better—in regard to the selection of varieties, and methods of cultivation; and I intend at some future time, Mr. Editor, to give you, or somebody's else readers, a more extended result of my observation and experience, when they shall have become more fully matured, unless the process blow all my preconceived notions and theories "higher than a kite."

If I were asked the question, "What pear, if limited to one variety, would you select for cultivation, as far North as you are?" I should unhesitatingly name the Flemish Beauty. It stands the winter admirably. I purchased a tree in 1845 for the *Beurre Bosc*, which proved to be the Flemish Beauty. This is the oldest tree I have of that variety. This tree, as well as all those propagated from it, has never suffered any injury from the winter, except in two instances—the winter of 1856-'7, and the one a year ago, that of 1860-'61. It now seems to be in perfect health. A neighbor of mine has a splendid tree of this kind, not so old as mine by a number of years, that produces bountiful crops of superb fruit. A friend of mine living in an adjoining town, who had quite a collection of pear trees, told me a few days ago, that, the winter before the last, he lost every pear tree he had, with the exception of the Flemish Beauty.

The *Urbaniste*, in point of hardiness, stands decidedly at the head of all pears I have as yet in my collection. It is of slower growth than the Flemish Beauty, and more tardy, in coming into bearing. Should this variety prove sufficiently productive, it will be a great acquisition to the list of hardy pears. From my own experience, I can see no reason, why these two varieties, so far as the growth and health of the trees are concerned, may not be cultivated, with as much success, and

with as little risk, as the apple. I think either of them, is harder than some varieties of the apple, the Baldwin, for one.

I have thought a plan of this kind would be a good one, and I think it might well be tried by those persons, if there are any such, who are interested in the cultivation of this fruit, and who, not having met with as good success as they expected, have become somewhat discouraged, and have about come to the conclusion that pear culture is a failure. Select a piece of ground that has not been continually cultivated. A square rod or more, according to the number of trees you wish to put out, near the gate where you turn your cattle into the pasture, which has been enriched by their continual droppings, would be an excellent spot. Prepare this, or any other piece of good, new land, as you would for any valuable crop, cabbages, for instance. Procure young and healthy trees of one year's growth from the bud or graft, twice as many as you may need—the overplus, will be wanted by some of your neighbors,—and set them in rows, to suit your convenience, say 3½ feet between rows, and two feet or more between trees. Put no manure among the roots. You can manure on the surface as much as you please. Keep the ground mellow, and free of weeds, by constant cultivation, or the whole surface thoroughly mulched. If you think your ground needs farther enriching at any time, the best way, and the best season, is to spread a coat of manure, with a sprinkling of ashes, on the surface, late in autumn, and let it lie all winter. It may be removed in the spring, or forked in near the surface. If there is danger of the trees being thrown out by the frost, a heavy coat of mulch will remedy that. If they stand where the snow would be likely to break them down, train them in single shoots, stick a small stake perpendicularly, close to them, and tie them in several places fast to it. Let the trees remain till of suitable size for their final removal to the garden, or orchard.

In pursuing this course, several advantages will readily occur to the mind. The original cost and transportation will be small. They are more likely to live and grow well than larger trees, where they have to be procured from a distance. You can train them in a form to suit yourself, with branches high or low, by preserving or cutting back the leading shoot. When of suitable size to remove, you can select a good time for that purpose—a dull or misty day—can remove them one at a time, as convenient, without exposing the roots to drying weather, and you will have no breaking and bruising of the limbs by the rough handling on railroads. You will get better roots, for pear trees, as they are usually managed, with only one transplanting, that from the seed-bed to the nursery rows of a rich, deep trenched soil, are inclined, oftentimes, to grow with long, naked roots. Every removal promotes the growth of healthy, fibrous roots.

I have great confidence in setting young trees, and am preparing myself to supply the demand, should there be any market for them hereafter. The trees I now have growing, will be worth more to me, to grow a year or two longer. I will, however, supply a few for trial, of some good varieties, that succeed well here, such as Flemish Beauty, Urbaniste, Beurre d'Amalis, Rostiezer, &c. I have a few Bartlett's, but would not recommend

them except to those living in a favorable locality. They will do nothing with me; are very tender, and exceedingly liable to winter-kill. I can raise small trees because they are usually protected by the snow, which now, (April 18,) covers my nursery, in many places, from one to two feet deep.

Wakefield, N. H., April 18. JOHN COPP.

REMARKS.—We shall be glad to hear from our correspondent again.

PROSPECT OF CROPS IN ENGLAND.

The following articles are from the *Mark Lane Express*, a paper published at London, and devoted, exclusively, to the agricultural interests. These articles indicate that a very large amount of our agricultural products will be needed in England and France, so that there is every reason why our farmers should engage earnestly in seeding and cultivating. This, added to the fact that large numbers of our productive men are in the army, and consequently withdrawn from the cultivation of the soil, ought to be a sufficient stimulus for us to produce all we can.

The paragraph which follows is from the *Express* of April 14, and certainly presents rather a gloomy prospect for our transatlantic brethren:

The increasing wetness of the past week looked very ominous for the entire season. March having been rainy, it was to be hoped that the present month would have been genial and drier than usual, but the soil has now become flooded in low situations, and so generally saturated, that field labors were impracticable: warm and dry weather is seriously wanted. The grass and early sown corn have indeed been rapidly growing, but the latter is in danger of running into straw, and the wheat that was most forward was getting rank and spindly. But the weather has lately gone round to the other extreme, and much harm may now result from the sharp frost. We have, therefore, become much more dependent on foreign supplies, and there is already a greater firmness in the trade, notwithstanding good stocks and heavy arrivals, more especially of American flour.

The following, a week later, does not seem to promise much more for the crops than the foregoing:

The past week has varied, the opening being cold and harsh, followed by a heavy rain, and closing with a more genial temperature. The effects of the late changes have plainly told upon the growing crops, much of the wheat having become yellow and unhealthy in appearance; but, on the whole, a check to its luxuriance may be serviceable. More wire-worm has, however, been complained of, as well as misplant, and the first severe frost after so much rain, must have cut the pear blossoms and earlier fruit.

In the last number of the *Express* which we have received, and dated April 28, we find the paragraph which follows. This looks a little more encouraging, but still leaves room for some anxiety in regard to the crops in Europe:

The past week has been highly favorable to the growing crops as well as to all field labors. The sowing of Lent corn has proceeded rapidly, and, though late in the ground, in this uncertain climate the last sown, may, in point of yield, be first. But the changeable character of the season is exhibited in the appearance of the young wheat. The clays in low situation having been swamped by the wet, look yellow and sickly. In the light soil there is much misplant through wireworm, while the medium soils well in heart are yet full of promise, and the ripening of such may be early. The reduction of stocks, however, in farmers' hands becomes more evident, and the scanty provision sent by the near counties to the London market looks very much like exhaustion, as prices, considering the deteriorated condition of samples, are not low. Nor is London alone in limited supplies: many of the country markets have been getting very thin, insomuch that several have noted an advance of 1s. per qr.

LADIES' DEPARTMENT.

A BIRTH IN THE FAMILY.

It is strange how, while one soul is passing out of this world, another enters, all unconscious of the strange scenes of confusion which it is to witness, of the hand-to-hand struggle in which it is to be engaged. For some time, various small preparations and signs have given token of an expected event; a pair of bright, dark eyes have grown soft and thoughtful, crochet and brilliant-colored double zephyr have been thrown aside for tiny strips of cambric, fine soft flannel and white silk floss, the last of which the delicate hands weave into charming imitations of leaves and flowers. Very recently a small dainty bed, enveloped in the fleecy folds of a transparent canopy, which only half conceals marvellous frills and a perfectly miraculous quilt, (the work of Aunt Deborah, who once took a prize at the State Fair, for the handsomest coverlet on exhibition,) has taken its place, timidly, at the foot of the imposing mahogany, evidently awaiting for an occupant. This very morning it has found one, a tiny, rosy morsel, so done up in soft, warm wrappings, that no one can but just get a glimpse of a little red nose, and the twinkle of something like eyes. Everybody says, however, that it is a "beautiful baby," and the delighted papa astonishes a small boy who has rung the front door-bell for cold victuals, by giving him a quarter, instead of a cuff, as usual.

The dark eyes which but lately flashed so mischievously are now closed wearily, curtained by long lashes, which lay still on the white cheek. Friends have congratulated; the proud father is full of tenderness and devotion; cherished hopes are realized. Yet at intervals a large tear forces its way down through the tightened eyelids, showing that one heart at least can hardly yet recognize its joy. Who shall fathom the depth of a young mother's thoughts as she holds for the first time, the child she has borne, to her breast? Who shall tell the profound emotion with which she dimly sees in her anticipated toy, the plaything, a human soul, a future man, whose strong will and fiery nature it is hers to mould for good or ill? Now, for the first time, she feels that she has be-

come a woman; that with a woman's crown, she has received the woman's cross, which she is henceforth to bear with enduring love and faith unto the end. Now prays she with the fervor of her youthful heart, though it may be perchance for the first time, for with the birth of her child a new element has entered her heart, a new spirit has been born unto God.—JENNIE JUNE, in *N. Y. Sunday Times*.

WOMAN.

Place her among flowers, foster her as a tender plant, and she is a thing of fancy, waywardness and sometimes folly—annoyed by a dew-drop, fretted by the touch of a butterfly's wing, and ready to faint at the rustle of a beetle; the zephyrs are too rough, the showers too heavy, and she is overpowered by the perfume of a rose-bud. But let real calamity come, rouse her affections, enkindle the fires of her heart, and mark her then; how her heart strengthens itself—how strong is her purpose. Place her in the heat of battle—give her a child, a bird—anything she loves or pities, to protect—and see her in a relative instance, lifting her white arms as a shield, as her own blood crimson her upturned forehead, praying for life to protect the helpless.

Transplant her in the dark places of earth, call forth her energies to action, and her breath becomes a healing, her presence a blessing. She disputes, inch by inch, the stride of the stalking pestilence, when man, the strong and brave, pale and affrighted, shrinks away. Misfortune haunts her not; she wears away a life of silent endurance, and goes forward with less timidity than to her bridal. In prosperity she is a bud full of odors, waiting but for the winds of adversity to scatter them abroad—pure gold, valuable, but untried in the furnace. In short, woman is a miracle—a mystery, the centre from which radiates the great charm of existence.

VEAL PIE.

Take about two pounds of veal from the loin, fillet, or any odd pieces you may have. Parboil enough to clear it of the scum. If it is to be done in a pot, make a very light paste, roll it out rather thick, and having your pot well greased, lay it round the sides, cutting out pieces to prevent thick folds, as the circle diminishes. Put in a layer of meat, with salt and pepper. Enrich it with butter, or slices of salt pork, and dredge in a little flour. So proceed until you have put all in. Cover with paste, and cut a hole in the top for the escape of the steam. Pour in a portion of the water in which the meat was boiled. Set it over a slow fire; watch that it does not burn; and if it gets too dry, add more of the same water, through the hole in the top. If you wish the crust brown, cover the pot with a heater or bake-pan cover. It will be done in an hour and a half.

If the pie is *baked*, make a richer crust, in the proportion of a pound of butter to two pounds of flour; put it in a pan, in the same manner as above; notch the edges of the paste handsomely, and bake about the same time.

To make the paste spoken of above, take three pounds of flour, to which allow a pound and a half of butter, or other shortening. Divide the butter in equal parts, and rub one portion into the flour.

As soon as you put the water in, stir it up quickly; and having sprinkled flour on your board, turn it out, sprinkle flour on the top, and roll it out, pressing the rolling-pin equally, so as to make it of equal thickness. Cut the butter in thin shavings and spread over the whole surface; dredge with flour and roll it up. Roll out again; and proceed as before, until all the butter is used; but see that you have taken it all in three times—for that is enough. This makes an excellent paste, and can be used to advantage in other dishes, where a like article is required.—*Cook's Manual.*

STOPPED WORRYING AND BEGAN TO LAUGH.—A clerical friend, at a celebrated watering-place, met a lady who seemed hovering on the brink of the grave. Her cheeks were hollow and wan, her manner listless, her step languid, and her brow wore the severe contraction so indicative both of mental and physical suffering, so that she was to all observers an object of sincerest pity.

Some years afterward he encountered this same lady, but so bright, and fresh, and youthful, so full of healthful buoyancy, and so joyous in expression, that he questioned himself if he had not deceived himself with regard to identity.

"Is it possible," said he, "that I see before me Mrs. B., who presented such a doleful appearance at the Springs, several years ago?"

"The very same."

"And pray tell me, madam, the secret of your cure? What means did you use to attain to such vigor of mind and body, to such cheerfulness and rejuvenation?"

"A very simple remedy," returned she, with a beaming face. "I stopped worrying, and began to laugh; that was all."

SCALDS AND BURNS.—The best, most instantaneous and most accessible remedy in the world, is to thrust the injured part in cold water, send for a physician, and while he is coming, cover the part an inch or more deep with common flour. The water gives instantaneous relief by excluding the oxygen of the air; the flour does the same thing, but is preferable, because it can be kept more continuously applied, with less inconvenience, than by keeping the parts under water. As they get well, the flour scales off, or is easily moistened and removed. If the injury is at all severe, the patient should live mainly on tea and toast, or gruels, and keep the bowels acting freely every day, by eating raw apples, stewed fruits, and the like. No better and more certain cure for scalds and burns has ever been proposed.

THE English girl spends more than half of her waking hours in physical amusements, which tend to develop and invigorate and ripen the bodily powers. She rides, walks, drives, rows upon the water, runs, dances, plays, sings, jumps the rope, throws the ball, hurls the quoit, draws the bow, keeps up the shuttle-cock—and all this without having it pressed forever upon her mind that she is thereby wasting her time. She does this every day, until it becomes a habit which she will follow up through life. Her frame, as a natural consequence, is large, her muscular system in better subordination, her strength more enduring, and the whole tone of her mind healthier.

THE CATTLE MARKETS FOR MAY.

The following is a summary of the reports for the five weeks ending May 24, 1862:

NUMBER AT MARKET.

	Cattle.	Sheep.	Veals.	Shotes.	Fat Hogs.
April 25.....	1015	1778	150	2500	300
May 1.....	1728	3984	500	2000	700
May 8.....	980	2470	250	1600	1200
May 15.....	1518	2113	400	400	400
May 22.....	1200	1535	250	1300	500


According to these figures there were at market during the last five weeks 6441 cattle. Of these, 4346 were from the West, or purchased in Albany, leaving only 1595, or less than one-fourth of the whole, as the number from New England and the Northern part of New York. Most of the cattle from the West are well-fatted beeves. Some thirty milch cows are, however, included in the number of Western cattle reported for the last three weeks.

PRICES.

	April 24.	May 1.	May 8.	May 15.	May 22.
Beef cattle, 4 th lb.....	@ 7	5½ @ 6½	5½ @ 7	5½ @ 7	5½ @ 6½
Sheep, wool on, live wt. 4½ @ 5½	4½ @ 5½	4½ @ 5½	4½ @ 5½	4½ @ 5½	5 @ 6
Sheep, clipped, live wt. 3½ @ 4	3 @ 3½	3 @ 3½	3 @ 3½	3½ @ 3½	3½ @ 4
Swine, stores, wh'sale... 3 @ 5	3½ @ 5	3 @ 5	3 @ 5	4 @ 6	3½ @ 5
" " retail.... 4 @ 6	4½ @ 6½	4½ @ 6	4½ @ 7	4½ @ 6	
Live hogs.....	@ 4	4 @ 4½	3½ @ 4½	3½ @ 4½	@ 4
Dressed hogs.....	@ 5	5 @ 5½	4½ @ 5½	5 @ 5½	@ 5
Veal calves.....	\$3 @ 6	\$3 @ 5½	\$2½ @ 5½	\$2½ @ 5½	\$3 @ 5

A CURIOUS EXPERIMENT.—Take a piece of paste-board about five inches square, roll it into a tube with one end just large enough to fit around the eye, and the other end rather smaller. Hold the tube between the thumb and finger of the right hand (do not grasp it with the whole hand;) put the large end close against the right eye, and with the left hand hold a book against the side of the tube. Be sure to keep both eyes open, and there will appear to be a hole through the book, and objects seen as if through the hole, instead of through the tube. The right eye sees through the tube, and the left eye sees the book, and the two appearances are so confounded together that they cannot be separated. This is one way to see through a millstone. The left hand can be held against the tube instead of a book, and the hole will seem to be through the hand.

BE KIND TO YOUR SISTERS.—Boys, be kind to your sisters. You may live to be old, and never find such tender, loving friends as these sisters. Think how many things they do for you; how patient they are with you; how they love you in spite of your ill temper or rudeness, how thoughtful they are for your comfort; and be you thoughtful of theirs. Be ever ready to oblige them, to perform any little office for them that lies in your power. Think what you can do for them, and if they express a wish, be ready to gratify it, if possible. You do not know how much happiness you will find in so doing. I never knew a happy, respectable man who was not in his youth kind to his sisters.

 A large number of Germans are about to emigrate to this country, and will settle in Illinois, Wisconsin and Minnesota. This immigrating party consists principally of wealthy land-owners, and among them are several barons. About twenty thousand acres of land have already been purchased for them in the three States named, and it is expected they will arrive by the middle of July.



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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SIMON BROWN EDITOR.
HENRY F. FRENCH, ASSOCIATE EDITOR.

JULY.

Loud is the summer's busy song,
The smallest breeze can find a tongue
While insects of each tiny size
Grow teasing with their melodies,
Till noon burns with its blistering breath
Around, and day lies still as death.

JOHN CLARE.



JULY is a busy time with the farmers of New England. It is the great haying season here, as it is also with the farmers in many countries of the old world. Indeed, so generally is this the case in Europe, that, before its name was changed in honor of the great Cæsar, JULY was called *Heumonat*, or the mowing month, a name far more appropriate, it would seem, than one which was chosen merely to honor an individual whose birth is said to have occurred in this month.

If any thing could perpetuate a man's memory, or confer immortality upon a human being, surely to have his name borne down to posterity by one of the twelve months of the rolling year must be sufficient. But how signally has even this failed! Though the name of JULY is borne by the seventh month, how few of the living millions who speak or write that word are reminded of the dead monarch from whose title it was originally taken! Poor old Julius Cæsar, though your name may be pronounced by our lips or written by our pens, it has no power to "keep your memory green" in our hearts. It does not remind us of you, but of a certain round of work which has become associated in our minds with July—prominent among which are the labors

of the hay-field, with the management of the mowing machine, the horse rake, &c. &c., which are doing the drudgery, among us, that was performed by the human machines which, under taskmasters, gathered the harvests of old Rome, in your day, most noble July—us!

And this suggests a pleasant practical thought—the mission of machinery. We say a pleasant thought, because, in the first place, we look upon machinery as the most effective of all emancipators. "Slavery and the slave trade," says Bancroft, "are older than the records of human society;" yet both history and observation show that slave labor has always been, and still is, confined to that class of work which requires physical strength rather than mental energy, or to those kinds of service which may be constantly superintended by master and mistress, or by their hired overseers. Slaves have never been, to any extent, employed in any branch of business in which calculation, thought, foresight or responsibility are necessary. This principle is so well understood, and so generally acted upon by slaveholders, that laws have been enacted to prohibit the education of slaves, and, even in our own country, women have been imprisoned for teaching slaves their letters! No, slaves are machines, and when their tasks can be more promptly and cheaply executed by the soulless engine, then, indeed, shall the oppressed go free. Slave labor, already driven from the manufacturing centres of the world, seems to have made its last stand on the broad fields of the plantation. A machine once introduced there, that shall harvest cotton as the McCormick or Buckeye does wheat, would soon whistle the death-knell of human servitude, provided the "necessities of war" do not anticipate the inevitable destiny of hot air and steam.

In the second place, it is pleasant for us to think of machinery as the improver and elevator of the laboring classes generally. Especially at this season of the year, when the physical system is weak-

ened by the tropical heat of the July sun, or our strength seems insufficient for the work which presses upon us, we love to think of the good time coming when wheels and cranks, levers and pulleys, of wood and iron, and other unconscious material, are to relieve overtaken human sinews on the farm, as they already have done to so great an extent in the shop and factory.

We do not suppose that all farmers will agree with us in these pleasant anticipations. There are now, as there always have been, many good men, especially among the laboring classes, who look upon the introduction of new machinery, and indeed, upon all new modes and improvements with fear and jealousy. The first saw-mill in England, it is said, was demolished. And probably there is no machine in use whose introduction was not objected to and opposed by some individuals, often with the plea that its employment would deprive honest men and women of the means of support. But this objection generally proves groundless. The old copyists who made books with the pen, in the city of Paris, mobbed the man who first offered printed books for sale; yet the invention of printing has increased bookmakers many hundred fold.

For our own part, we like to listen to the clatter of a mowing machine as it moves along through the meadow, and to the busy click of the sewing machine as it assists the women folks in their labor.

We rejoice at all these evidences of the union, even upon the farm and in the farm-house, of Mind with Hand.

TIME TO CUT TIMBER.

When is the best season to cut building timber other than evergreens—say oak, maple, beech, basswood, &c., to be cured in the old-fashioned way after it is in the frame? Our people differ very much upon the subject; some say when the leaf is off; others when it is on—some say when the bark will run; others prefer the winter in February. Another class, that when the sap is out of the wood, which they claim to be in summer, while others maintain that that time is in February. I have had but little experience, but that little leads to the time when the bark will peel, which is generally in the early summer. What say you? It is of importance to me just now, and I should like to know.—G. CLARKE, *East Springfield, March, 1862.*

P. S.—I notice in many of our frames, much of the oak has powder-posted. That ought not to be. I am a great lover of oak on account of its strength, but don't want a powder-posted building. I don't mean white oak; that has all left long ago.

[Summer is the best time to cut timber, chiefly because it seasons rapidly at that time. It should, of course, be left in the logs as short a time as practicable. Timber cut in winter is long drying, and incipient decay commences before the process is completed. There is rather more sap in a tree

in winter and early spring than in summer, when the leaves have carried off a part. The wood is also rather less watery after midsummer than before, and dries better, and makes harder seasoned stuff. It is, therefore, not quite so well to cut it till rather after midsummer.]—*Country Gent.*

NEW PUBLICATIONS.

OPEN AIR GRAPE CULTURE: A Practical Treatise on the Garden and Vineyard Culture of the Vine, and the Manufacture of Domestic Wine. Designed for the use of Amateurs and others in the Northern and Middle States. Profusely Illustrated with new Engravings from carefully executed Designs, verified by direct practice. By JOHN PHIN, Author of *Essay on Open-Air Grape Culture*, to which was awarded to first premium of the American Institute. To which is added a Selection of Examples of American Vineyard Practice, and a carefully prepared description of the celebrated Thornery System of Grape Culture. New York: C. M. Saxton, Agricultural Book Publisher; Boston: A. Williams & Co. 1 vol. 12mo, 375 pp. Price \$1.

This is a valuable work for the common cultivator. It has full directions in relation to the preparation of the soil by draining, trenching and manuring, the time and mode of planting the vines, and the subsequent care necessary to be devoted to them in order to secure compensating crops. It has a chapter, also, on the various modes of propagating the vine, and, indeed, upon every particular point of information which those unacquainted with grape culture may require. The work is beautifully printed on large type, and will be found a valuable help to those who consult its pages.

What we need, however—and what no book can supply—is a grape that is sufficiently hardy to withstand the rigor of our climate unprotected, and that will perfect itself during our short seasons of growth. We shall have such a grape, undoubtedly, but it has not made its appearance yet. In the meantime, let us consult the book before us, and press on to greater success.

THE BEST TIME TO PRUNE.

An old clergyman is quoted as defining this time to be "when your knife is sharp." He was certainly half right, for a smooth, clean cut is very essential to the healing of the wound. But there is very great difference in the healing of wounds on account of the season in which they are made. Pruning done in March and April, especially if large limbs are removed, often injures an orchard for life. The sap oozes from all the pores and runs down the bark, discoloring it and oftentimes destroying it—called scalding. Without other protection, decay begins, and in a few years you have a hollow limb.

We like the month of June for pruning better than all others. If the work is done soon after the new wood begins to form, the wounds made by the removal of small limbs will be nearly covered over the same season they are made. The leaves make such a demand upon the wood for sap that none of it escapes from the wounded pores. It is also a favorable time for thumb-pruning. By watching the growth of the shoots upon young trees they may be brought into symmetrical shape without much use of the knife.—*American Agriculturist.*

For the New England Farmer.

ROTATION IN FORESTS.

MESSRS. EDITORS:—Stupidity must rule in the cranium of the man that does not feel a degree of enthusiasm, or an elevated reverence for that Being who administers the laws of nature, as demonstrated to the sight of every farmer who has eyes to behold "God's handiworks." Every man who has seen half a century or more, and has spent all or part of his days in the country, in the neighborhood of forests, and has been a careful observer of the progress and productions of nature, has seen a succession of the different species of forest trees, or the varieties of the same species succeed each other on the same tract of land, without man's aid or interference. When the first settlers took possession of the soil which we now occupy, they found it in some places covered with the different kinds of oak, and other hard wood, and in other places with the pine varieties, or other evergreens. After the removal of the original growth of hard wood, I have found it succeeded by evergreens. If evergreens composed the original growth, it was succeeded by some of the varieties of hard wood, or of a different variety of the evergreen from the original growth.

In the State of Maine, I have seen, on the removal of a heavy growth of beech, birch and maple, dense crops of hemlocks springing up, and in my own neighborhood, on chopping off an oak growth, a pitch pine one has succeeded, and on cutting that off, white pines have sprung up in multitudes. Every kind of soil has a constant tendency to production; even our most grain-worn fields, on suffering them to lie without cropping, are soon filled with young pines, which spring up in such numbers as to surprise us. The Almighty formed the soil for activity, as well as the animals which inhabit it, and its being destitute of the fertilizing power which produces grain, is no hindrance to the growth of the pine varieties.

The above remarks suggest that every vegetable, and every distinct species of tree, with all their varieties, flourish in consequence of a specific fertilizing principle imbibed from the earth by a peculiar set of absorbent vessels adapted to the nature and wants of each, which cause their gradual growth and ultimate maturity. On the exhaustion of the nutriment which produces one distinct species of vegetable, or tree, the nutritive principle which is required for the growth of other species is left unimpaired in the soil, to be applied when called for by others, and the earth, while in the progress of exhaustion by the production of one species of trees, or other vegetables, is accumulating a supply of nutrition which will be required by trees and vegetables of other species to promote their growth. The nourishing, elementary principle which produces the hard wood varieties, has no affinity for the evergreens, and, therefore, the evergreens will flourish after the hard wood is done growing, in consequence of the soil being exhausted of that element which produced it, and so one variety of evergreens will succeed another for the same cause.

We frequently hear complaints of the "running out," as it is called, of many kinds of vegetables, and the deterioration is supposed to be owing to a degeneracy of the seeds sown, when, in fact, it is caused by the want of the knowledge of rota-

tion, and putting this knowledge into practice. We are taught the doctrine of rotation by nature herself, in the arrangement which she makes in the natural forests, if we would but observe her laws. All vegetables exhaust the soil in proportion to the nourishment which they afford. Oats, which are so nourishing to horses, exhaust the soil more than any root crop with which I am acquainted. I have seen four or five good crops of corn and rye grow upon pine plains, in succession, without manure, where a heavy growth of wood had been recently cut off, and but little brush left on the ground to make ashes, which is evidence sufficient to convince us that the same kind of food which feeds the forest, is not the favorite of the various kinds of grain. Thus it seems that every kind of vegetable extracts some peculiar principle of nutrition from the earth congenial to its own wants, and differing from that required by others, and this accounts for the necessity of rotation in raising our crops, if we would wish to realize the greatest profit from our labor.

Wilmington, 1862.

SILAS BROWN.

WHITE-WASHING EXTRAORDINARY.

The Rev. James Williams, the well-known and philanthropic missionary, so long resident in the South Sea Islands, taught the natives to manufacture lime from the coral of their shores. The powerful effect produced upon them, and the extraordinary uses to which they applied it, he thus facetiously describes:

"After having laughed at the process of burning, which they believed to be to cook the coral for their food, what was their astonishment, when in the morning they found his cottage glittering in the rising sun, white as snow. They danced, they sung, they shouted and screamed with joy. The whole island was in a commotion, given up to wonder and curiosity, and the laughable scenes which ensued after they got possession of the tub and brush, baffled description. The high-bred immediately voted it a cosmetic and kalydor, and superlatively happy did many a swarthy coquette consider herself, could she but enhance her charms by a daub of the white brush. And now party spirit ran high, as it will do in more civilized countries, as to who was and who was not best entitled to preference. One party urged their superior rank; one had the brush and was determined at all events to keep it; and a third tried to overturn the whole, that they might obtain some of the sweepings. They did not even scruple to rob each other of the little share that some had been so happy as to secure. But soon new lime was prepared, and in a week not a hut, a domestic utensil, a war club or a garment, but was as white as snow; not an inhabitant but had a skin painted with the most grotesque figures; not a pig but what was similarly whitened: and even mothers might be seen in every direction, capering with extravagant gestures, and yelling with delight at the superior beauty of their white-washed infants."

BAROMETERS.—If our correspondent, writing from Enosburgh, Vt., will send us the facts to which he alludes, in relation to the barometer, we will publish them for the benefit of the public.

GEOLOGICAL SURVEY OF MAINE.

We find in the New York *Journal of Commerce* the annexed synopsis of the results of a partial geological survey of the State of Maine, made under direction of the Legislature by E. Holmes, of Winthrop, Me., naturalist, and C. H. Hitchcock, of Amherst, Mass., geologist. Many interesting and important facts are brought to light by the survey:

Late in the season of 1861, these two gentlemen with a number of assistants and a flotilla of canoes, explored a large district, known previously only to lumbermen. They went up the east branch of the Penobscot its whole length, explored the vicinity of Mount Katahdin, examined the country around the Allequash Lakes, descended the Allequash river, explored the St. Francis river to the State line, travelled down the St. John river from Number Eleven, or the latitude of Quebec, to Woodstock, N. B., and explored the Eagle Lakes in the north-east part of the State, making in all over 800 miles travelled in birch canoes. Besides these routes, they have also explored the whole of the eastern boundary. The results of these labors are given in an octavo volume of 400 pages. The following are some of the most interesting results of these explorations:

1. There is a fine agricultural region in this new country. The eastern parts of Aroostook county are said to be the finest portions, while no part of the whole region examined can be said to be poor; good farms can be found anywhere north of civilization. The rank vegetation of some township reservations reminded the explorers of tropical luxuriance.

Some have supposed that the climate was too severe to permit Indian corn to flourish in the northern part of Maine. But these explorers saw fields of it above the latitude of Quebec, nearly ready for harvesting. They discovered some indications of a milder climate in the extreme north. There is a belt of country from thirty to fifty miles wide in which sub-arctic plants were found, indicating cold climate. But north of this cold zone, and embracing the greater portion of the territory, were found a number of plants which no botanists had ever seen before as far north as New England or Massachusetts. Hence the agricultural region of Northern Maine was found to possess advantages over the West. The climate permits the cultivation of all the important products, and the communication with the markets is ten-fold easier. Moreover, new settlers are never troubled with the Western fevers. It is one of the healthiest regions in the country, being visited in the winter by consumptive invalids even, with benefit.

A number of large beds of natural fertilizers were discovered in the eastern part of Aroostook, chiefly beds of marl, with some indications of gypsum. Many of those northern townships are held by private parties, who are opposed to the progress of civilization, because of the injury resulting thereupon to the timber lands. But the State still owns a large part of the finest agricultural districts, and it encourages emigration by granting to new settlers one or two townships every year.

2. Valuable quarries, of marble and other min-

erals, were found. The marble, in particular, is very abundant, and occurs in a belt of land several miles wide, running north-east and south-west, perhaps for a hundred miles. The marble is pure white, of the statuary variety. Specimens of it were shown to experienced sculptors, who declared it to be superior to the best imported marble.

Quarries of limestone for the manufacture of quick lime, and of roofing slate, were found to be abundant. A few opportunities for the smelting of iron are described. The extreme north-west part of the State, or on the upper St. John river, is pronounced to be a gold region, whose value was not determined for want of time. Suggestions are made that in the eastern part of Aroostook and the northern part of Washington county valuable ores of copper may be found.

In another part of the State this report states that a large mass of tin ore has been discovered, and that the indications for a tin mine are better than anything yet discovered in the country. It is to be hoped that this indication will bring a good tin district to light, since all our supplies of this metal are foreign.

3. Numerous important geological discoveries are noticed in the report, which are mostly of technical interest. The explorers found a highly fossiliferous region, where unfossiliferous rocks had previously been supposed to predominate. One of the new localities of fossils is said to have attracted much attention from savans already. The new belts of rocks discovered are partly equivalent of the Lower Helderberg Group and the Oriskany sandstone of New York.

The operations of the survey will be carried on vigorously the coming season. As soon as the snow is gone, an examination will be made of the wild lands bordering on Canada, from the New Hampshire line to the latitude of Quebec, a region as unknown to science and the public generally, as the Russian American possessions. Later in the season a vigilant search will be made in Washington and Aroostook counties for copper ore. Meanwhile a party of naturalists will cruise off the seacoast the whole season, collecting specimens of marine animals by dredging and with lines, as well as visiting many points and islands rarely explored.

GOOD TASTE.

Good taste is the "luminous shadow" of all the virtues. It is social discretion, it is intellectual kindness, it is external modesty and propriety, it is apparent unselfishness. It wounds no feelings, it infringes on no decorums, it respects all scruples. A man thus gifted, even though he be not a wit, spreads a genial influence about him from the trust he inspires. The stiff man can unbend, the cold can thaw, the fastidious can repose on him. No one is committed to more than he chooses—no ungenerous use is made of an unusual or transient impulse. Good taste is practical, though not deep, knowledge of character; it is perception of the distinctive points of every occasion; and thus it reconciles and harmonizes where bad taste perpetuates differences and necessitates separations. And yet we by no means wish to make good taste a synonym either for virtue or intellect—it is rather that quality which sets off both at their

best. It is an affair, in some degree, of social training—it is one aspect of knowledge of the world. Those who are little in general society—who confine themselves to family intercourse or to that of a set or clique, whatever the position, whatever the intellectual or moral pretensions of that clique—are almost sure to fail in it in new scenes. All persons of a single idea, engrossed by one object, are perpetually infringing on the rules of good taste. If they are religious, they are pragmatical and intolerant, regardless of sensibilities. If they are useful, they do their work with unnecessary fuss. If they are learned, or deep, or clever, they make these good gifts unpopular. If they are merry, we are kept on thorns—if they are grave, they are a check and restraint. They fail in every social crisis. In every difficulty they take the wrong way. They are forward when they ought to be retiring—their diffidence is constantly misplaced. There is no knowing where such people are—to what lengths an emergency or excited spirits will drive them. It is the cause of half the seeming injustice of society. The man of bad taste cannot comprehend why things are not tolerated in him which are allowed in others. He is the last to see that the presence or absence of a correct taste makes the same practice or amusement agreeable or repugnant—that nothing can be judged fairly without taking the manner of doing it into consideration. He is therefore for ever grumbling at the inconsistencies of mankind. The fact is, every hinge, with some people, grates and creaks, at each turn jarring on sensitive nerves; while good taste is the oil which keeps the machinery of society, with the least wear and tear, noiselessly and profitably at work.—*London Saturday Review.*

For the New England Farmer.

NOTES FROM THE MONOMACK.

BY SAGGAHEW.

SPARKS FROM A LOCOMOTIVE FARMER.—A short time since the writer enjoyed an hour's railroad ride with that well known and well to do Essex farmer, Mr. JOHN DAY, of Boxford. Whether or not the hour was well improved, let the reader judge, after glancing at the following "sparks."

HOW HE STARTED.—Mr. Day commenced as a farmer by taking a small farm to "carry on at the halves." He commenced without any capital whatever, except his own hands and *brains*. For twenty years he gave particular attention to raising grass for the market, and during all this time he annually sold nearly his entire hay crops. Notwithstanding this exhaustive process, his land actually improved year by year, so that where he at first cut only ten tons of hay per year, he has for the past twelve years averaged *one hundred tons* a year!

HOW HE DID IT.—In the first place, he annually used, and still uses, large quantities of peat muck. This he composts with anything and everything he can get hold of that will assist in its decomposition. He has it constantly in his barnyard, in his pig-pen and in his barn-cellar. He adds two cords of muck to every cord of manure dropped by his stock; one cord to every four bushels of wood ashes he can collect; large quantities to the contents of his privy and his hennery;

and in this way he annually collects pretty large heaps of manure. But not satisfied with this, he is constantly purchasing manure, and also the various other fertilizers, such as lime, gypsum, superphosphate of lime, guano, ashes, &c.

HOW HE MANURES.—He adopts the plan of a four years' rotation of crops—first year, corn or potatoes; second year, grain; third and fourth years, grass—and applies twenty cords of manure per acre to the planting crops. He thinks that one-third muck and two-thirds stable manure makes the best fertilizer for general purposes he ever used. He had rather have a cord of muck well composted with four to six bushels of wood ashes than the same bulk of clean stable manure. He thinks that no farmer, who has muck within reasonable distance, can afford to sell his wood ashes for less than one dollar per bushel, or leached ashes for less than fifty cents per bushel. He values coal ashes very highly, as an absorbent. He values sawdust at one dollar per cord, for the same purpose. He can't afford to shovel loam for compost, if he can get muck instead.

HIS CROPS.—For twelve years he has averaged from eighty to eighty-three bushels of shelled corn per acre. He now plants only the twelve-rowed corn, as he has found by experience that the same land and labor that will give him eighty bushels per acre of the twelve-rowed, will not give him above sixty bushels of the eight-rowed variety, and he thinks twenty bushels bonus worth having. He has now under cultivation only thirty-nine acres of tillage land, and he keeps twenty-five cows, six oxen and two horses. He raises and *feeds on his place* about 1000 bushels of grain annually. He can't afford to sell it. (He sells large quantities of milk.) He don't think meadow hay is worth harvesting. It is only fit for bedding, and he had rather have sawdust for that purpose.

BREEDS OF COWS.—He has tried various breeds and crosses for *milk*, and has concluded that as a general rule the half-blood Durhams are decidedly the best for milk *sellors*. They give a large quantity, and of a good color. The Jerseys he thinks are an excellent kind for a single family cow. The Ayrshires are desirable where a great quantity of milk is wanted.

MILK VERSUS WATER.—He found by actual measurement the past winter that during a period of two weeks, in which his cows were not once allowed out of the barn, they drank an average of forty-six quarts of water per day each; while for the week following, during which they were daily allowed several hours in the yard, the consumption of water was not more than one-half as much, and the gross product of milk was four gallons less per day. One reason for this difference, he thinks, is found in the fact that when his cattle are in-doors, they are quiet, warm and contented; but when turned out, they are apt to be restless, cold, and perhaps worrying one another. Under the latter circumstances they seem to eat more, but drink less. He allows his cattle free access to salt at all times. Both coarse and fine salt are kept constantly within their reach.

SORGHUM.—He thinks that our New England farmers will in time make all their own molasses. He has proved that he can make as good an article as he can buy, and at a cost not exceeding twenty-five cents per gallon. At first, he was

troubled about grinding the cane, but he has now a mill, of his own make, which works perfectly. With such a mill he could grind all the cane for a large number of farmers, and at a lower price than they could do it themselves. He doubts if we can make much sugar from the cane so far north as this, except in very favorable seasons.

For the New England Farmer.

CROWS---CROWS.

"Those intelligent, interesting, and mischievous black rogues."

We often hear the remark made that crows do more good to the farmer, than they do harm; and sometimes we find the same idea expressed in print. It is said they destroy insects; and they feed on the bodies of dead animals, thus preventing them from putrefying, and poisoning the air. Now I think there is no good excuse, in this part of the country, at least, for the body of any dead animal to lie on the surface of the ground; it should always be buried. Perhaps where the country is sparsely inhabited, and wild animals abound, which may die, or be killed, they may have been of some benefit. The damage done by the crow to the farmer's corn crop alone, exceeds the benefit derived from them in the destruction of insects.

I wish to relate some experience in this line. For a number of years previous to 1860, right in the face of all the scare-crowding I could do, these black thieves did me more than ten dollars worth of damage yearly. I tried many things to keep them off; a bough house made of pine boughs, with a "stuffed man" in it, which sometimes is effectual, was of no use. I hung up dead crows in the field, and they would pull up the corn within two rods of them; I tried a line around the field, fastening it to poles eight or ten feet from the ground, and they would go down into the middle of the field, and pull it up the faster. I was forced, in order to keep them off, to watch the field right in the midst of planting, when time was worth more than money. One year I planted a half acre rather late, and being from home a day or two, they dug out, and pulled up the largest share of it. And yet they have not served me as badly as they have some others. I know a man who cultivated land a mile or so from where he lived. He manured a field bountifully, and planted it with corn. In a short time he went to look at his springing corn, as he fondly anticipated, when lo! it was all pulled up! He planted it the second time, and the second time it was all pulled up; then it was late; he must plant it with potatoes. He was a poor man; this was all the corn he planted. Now let any crow-fancier have such an experience as this, and I have no doubt it would cure him of his partiality for the black rascals.

In the spring of 1860, I planted a field of about an acre and a half with corn; two or three days after finishing the planting, I went to the field, and found that the crows had begun to dig it out. I took some small stakes, four or five feet long, and run a line around the field; also up through the centre, then crossed it several times on the upper end, where the crows had begun to work. The next morning I went out to the field, and up flew an old crow from between the twines at the lower

end. There were some twenty or thirty hills dug into. Wishing to ascertain if twine could be put on so as to keep them off, I bought a ball containing about half a mile in length, and wove it all on; they did not go on to the field again.

Last year, as soon as our corn was planted, the twine was wove on; and although crows were about pretty plenty, it escaped damage, being "let alone." The crows would fly along with a "caw, caw," in their peculiar, warning note.

I have noticed in the spring, when crows pair off, and separate from the return flock, to build their nests, they appear to have a kind of division of the land, so that each pair have their particular fields to themselves; and although before they roamed peaceably over the whole, in common, now one pair will not let another transgress their bounds.

Crows possess some good traits; they exercise benevolence towards one another, as well as affection for their young. I saw one in a flock that was disabled, and hopped on one leg; others in the flock would get food, and carry it to him. I got a nest of young crows, one spring, from a wood nearly a mile off; they were almost ready to fly. Knowing that there was a nest in a small piece of woods not far from the house, I took one of them, tied a string to its leg, and made it fast to a stake, out in a lot, then watched to see what would happen. In a short time an old crow came flying over; the young one saw her, and cried for help; the old one answered, but still kept on, and afterwards returned to her nest. The next time she came over, the young crow called louder than before. The old one circled around, and lit on the fence a short distance off, and after some manoeuvring, she went to the young crow, and tried to liberate him by picking at the string. Not succeeding in this, she went off, and soon returned with something for it to eat. She continued to do this, going four or five times to her nest, and then returning to my prisoner. I now took my gun, went out, and lay in ambush. In a short time she came with her mouth full, lit a short distance from her charge, and ran towards it; just before she reached it, I fired; she rose up, perhaps three feet from the ground, and flew fifteen or twenty rods directly towards her nest, and dropt dead. Was I cruel? Would not the reader like to hear that Floyd had been shot? Well, this black rebel stole corn right from my neighbor's field, every kernel being worth more than a hundred-fold to him.

Laying aside all other charges, there is one way in which I consider that crows do the farmer more injury, than all the good they can possibly do in every way. That is, in their destroying the young of other birds. It is well known that the young of domestic fowls are taken whenever they come in their way; then just consider how many of the young of harmless and useful little birds must fall a prey to their rapacity, when there is hardly a nook or corner, a tree or bush, but what they scour in search of plunder.

Birds that beat the crow, will not allow one to come near their nests. A pair of king-birds have built their nest on an apple tree near the house for a number of years, and there are always two or three nests of other birds on the same tree, though there are other trees near by, that they might just as well build on. Is it not for greater safety that they build there? If a crow comes within an

eighth of a mile of this tree, you hear the warning note of the king-bird, who immediately gives chase and drives him off.

In destroying insects on a farm, I think that turkeys might be kept to much better advantage than crows. I had rather raise a dozen turkeys on my place, than a dozen crows; and how different the footing up sounds, in the fall, of the two investments; in the one case the music has been all addressed to the ear, and pitched to the tune of innumerable "caw, caw, caws;" in the other, the pocket is replenished with the musical jingle of ten or twelve dollars, and a Thanksgiving feast into the bargain.

The flock of crows that return to this part of the State, annually, in the spring, has been slowly decreasing for several years; I should think that last year they might have numbered twelve or fifteen hundred; the use of strychnine, no doubt, accounts for this decrease in a great measure. I should rejoice to spare ninety-nine one-hundredths of the remainder. Can any man benefit the public more by the use of twenty-five cents, than by purchasing that worth of strychnine?

Worcester, 1862.

L. R. E.

For the New England Farmer.

IMPROVED STRAW HIVES---HOW MADE.

Having succeeded in constructing a hive of straw, adapted to improved bee-culture, making it take and retain a shape suitable for movable frames and surplus honey-boxes, I announced it in the *Farmer* some months since, and at the same time an invitation was given for some one to give us a better form, as I did not suppose that I had the best one. Since that time, two straw hives have been patented, but whether they are sufficiently superior to mine to pay patent expenses, is not for me to say. Both of them have movable frames. One patented by Mr. M. Stillwell, Manlius, N. Y., very much like mine; the material difference is in the manner of securing the straw. Mr. S. Ide, East Shelby, Orleans County, N. Y., has one with double walls, with an air space between; the inner one of straw, the outer of wood, which serves to protect the straw from the weather, and as far as the sides of the hive are concerned, would do a great deal to protect the bees, and keep out the frost. It is well made, durable, and somewhat costly. The one I have is more simple, easier made, and probably may answer just as well. It is made to correspond in respect to height, length and breadth, to a wood hive that I have, with movable combs, so that the combs, bees, &c., may be transferred at any time. I would suggest that any one disposed to make the straw hive, who already has the movable combs, that they make it the same size of the wood hive, inside measure of course, as the straw will be much thicker than boards. It will be unnecessary for me to describe the frames, manner of supporting them, or size of the hive.

To make the hive, take strips of board, say one inch thick by two inches wide, and make two rectangular frames, halving or framing the corners together, and keeping the under surfaces in the same plane. These frames must be of the same size, and of dimensions according to the size of

the hive required. On the under side of the bottom one, cut a passage way for the bees, three inches wide by three-eighths deep. Lay this on the bench before you, and nail to it upright strips of lath—let them be an inch wide by one-fourth inch thick—the length corresponding to the height of the hive, the lower ends being even with the lower surface of the frame. If very smooth work is desired, these laths may be let into the frames just their thickness. When to be painted, it should be done before filling in the straw. These laths should be about four inches apart, inside and out, the two at the corners joining together. Now take long, clean straw. Rye straw is the smoothest if unthrashed, the better; get it even, and cut off the head, wet it and lay it between the upright pieces of lath, bending it round the corners in such a way as to make the walls of the hive, and press it close. When half full, if the hive is a deep one, pass some small annealed wire around the inner and outer lath, to keep them from spreading. Having pressed the space full, lay the second frame upon the straw directly over the first, nail the upper ends of the lath to it, and the hive, with the exception of the top, is done. Such a hive should have two tops, movable, of course, as in all movable comb-hives; one of wood, to be used during the gathering of surplus honey, and the other of straw, for winter and spring. This straw top may be made on the same principle as the hive. Make a frame of the proper size, and two inches deep; nail pieces of lath on the under side, sinking them in so as to leave a level surface, fill in above them with straw, and bind it down with lath nailed above. It will be unnecessary to leave any passages for ventilation, and as the wood top is used in the honey season, no holes are necessary in the straw top, to communicate between the boxes and hive. Allow the hive to dry out as fast as possible, and when dry, it is ready for the bees. They may be transferred at any time. If the weather is cold, take them into a warm, dark room, using a candle to work by. Such a hive, with no ventilation but that afforded by the porous absorptive mass of straw of the side and top, has been found free from frost, and the bees in very comfortable condition, when the thermometer stood at 10° below zero. As I have heretofore given my views relative to the advantages of straw hives in the *Farmer*, I will not repeat them here.

M. QUINBY.

St. Johnsville, N. Y.

DRYING UP.—A letter from a gentleman visiting the oil region in Pennsylvania, dated at Oil Creek, April 13, confirms the recent reports as to the great decrease in the produce of the oil wells. On his arrival there about two months since, one well flowed 1200 barrels in 24 hours. On the 12th inst., it yielded but 300 barrels in the same period. Six other wells, which on his arrival yielded 400 barrels each in 24 hours, now yield respectively 150, 100, 80, 40, 20 barrels, and the sixth none. Another well which then yielded 550 barrels, now produces not a drop. He says, however, that new wells are daily being sunk further up the creek, were it not for which, he thinks the supply would soon give out, and as it is, he is of the opinion that oil will soon be scarce in that region.—*New Bedford Standard*.

For the New England Farmer.

PROPER LOCATION OF BUILDINGS ON THE FARM.

Most of the readers of the *Farmer* have doubtless often been struck with the want of taste or judgment displayed in the relative position of farm-houses and out-buildings connected with them. This is not, however, the subject I propose to consider in this article, but leave for others to dispose of, if it has not already been done, to their entire satisfaction. I now wish to bring forward what I consider a more important matter, viz: The location of farm buildings so as to secure the greatest economy in all our farm operations. That this is lamentably overlooked, we have abundant evidence on every hand.

A year or two since I rode out of Boston a few miles to look at a farm that was offered for sale, very cheap, I thought, from the description given. When I arrived on the premises I found a noble farm of 200 acres of excellent land, compact, and all readily covered by the eye from the centre of the farm, affording a fine prospect of the surrounding country. All that was wanting to complete the picture, was the farm buildings, which were located on one corner of the farm, by the highway, and consisted of a new house, costing over \$5000, an old barn, corn-house, carriage-house, &c., not worth to any one over \$500, and for which and proximity to the highway the house was located, and the profitable working of the farm sacrificed.

As these buildings were located, all the teaming to be done upon the place was at great disadvantage, involving unnecessary distance, up-hill road, and of course more strength of team. In the case of this farm, if the buildings were placed upon the summit, which was near the centre, the farmer could overlook his place; anything out of bounds would be quickly known and readily attended to; his manure easily distributed, and his crops economically gathered. All these considerations seem to have been overlooked, or sacrificed, for the sake of the old shanties by the highway, and having the house convenient to them.

In another instance, I went to view a farm of over 100 acres, and found it extending back from the road three-fourths of a mile, up quite a steep grade. The road front was narrow, and the house an old, poor thing, on a line with the road, if not partly in it, near by which a new and expensive barn had been built.

What judicious farmer would buy farms with buildings located as those described above, unless at such a price as to admit of his revolutionizing the whole arrangement? A great propensity prevails in New England to locate houses near the public highway. The eligibility of other parts of the farm is ignored, and its value sacrificed for this seeming advantage. If the road should pass through near the centre of the farm, very well; but even in this case, have a good spacious lawn and carriage-way in front, trees, shrubs, evergreens, &c., for surroundings, and you add greatly to the estimate the observer will place upon it.

But we cannot now alter our present arrangement without serious cost, exclaims many. No doubt of it, so far as most farmers are concerned. My object is to direct the attention of those who propose to erect new buildings to the importance

of putting them in the right place. Don't let an old shell of a barn induce you to put a new house near it, unless it is, all things considered, the very best place. In the case of the two farms I instanced above, I estimated the additional, needless expense for labor and team, as equal to that of one man and a yoke of oxen or a span of horses. How much this would amount to annually, all can reckon for themselves, according to the value of such labor in their several localities.

You who are contemplating building, ponder these suggestions. O. K.

Rochester, Mass.

For the New England Farmer.

PLAN OF A SHEEP BARN.

Having seen in your columns a call for a plan of a sheep barn to be situated on level land, and of ample capacity to accommodate 200 sheep, I offer the following: I would build it 32 feet wide, and 75 feet long, and divide into bands of 15 feet each, the divisions being made by running foddering racks cross-wise the building. Each of these apartments will accommodate 40 sheep, giving each, one and one-half feet while at the racks. In the centre of the front of each of these apartments there should be hung a door, from six to eight feet wide, which may be left open or closed at will. In the centre of the back of each apartment there should be a window made to slide back and forth, which should be left open during mild weather, but closed when the storms beat. In speaking of the doors, I should have said that the middle band requires a door as large as those of a common barn, so that hay may be driven in through them. A water tank should be placed at the end of every other rack inside the building. This barn should stand fronting the south or south-east, and there should be a separate yard for each apartment, in which the sheep may sun themselves. The height of the sheep-room should be eight feet, and that of the hay-loft six feet to the foot of the rafter. Eave spouts are required on the front side of the barn to prevent the water dripping on the sheep during a thaw or rain storm.

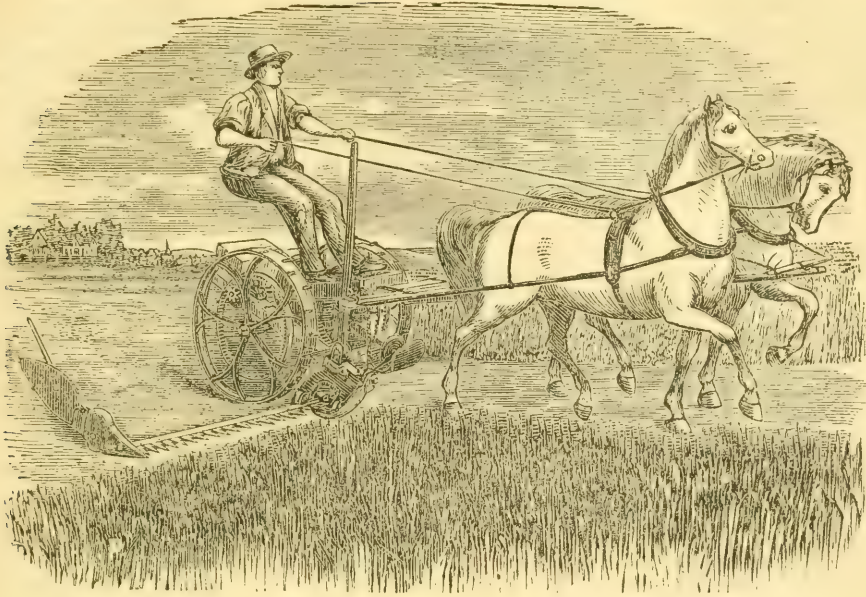
The prominent advantages of such a barn are these:

1. You can feed under cover at all times.
2. The sheep and their fleeces are thereby kept dry; otherwise, both are greatly damaged.
3. One is put to no inconvenience in clearing the racks of snow after a storm.
4. A greater amount of better manure can be made; better, perhaps, because better preserved. Two hundred sheep kept in a barn of the above description, and occasionally littered down with straw, say enough to keep them clean and dry, will make a great amount of the very best manure.

GEORGE CHALMERS, JR.

Newbury, Vt., 1862.

REMARKS.—We regret that a few lines connected with the above article have been lost. They were on a separate piece of paper, and were either not enclosed by the writer, or have been mislaid since. They related, merely, to some of the advantages of the barn which he has described.



THE UNION MOWING MACHINE

This Machine was introduced to a limited degree, last year, and in accordance with our custom of giving our readers such information as is in our power in regard to new implements for forwarding farm labor, we publish the above cut, and give a plain description of the Union Mower.

The machine weighs about 550 pounds, sets upon two driving wheels, either one of which operates the knives when the machine is in motion. Inside of the circumference of the driving wheel is a smaller ring, furnished with cogs upon its inner side, which cogs act upon a pinion at the end of the shaft, passing from one wheel to the other. On the shaft nearly under the seat, is another wheel, with cogs upon its side, by means of which motion is communicated to the crank shaft which carries the knife bar. The machine is thrown out of gear by a simple arrangement which can be operated either by the foot or hand of the driver, and the whole finger bar, with knives and all, can be lifted by means of the lever in front of the driver's seat, so as to pass any obstruction. There is a hinge at the heel of the finger bar, allowing it to be lifted into an upright position, where it is held by a little catch of iron, in which position the machine can be drawn along the road or from field to field. The knife bar, instead of sliding upon the surface of the finger bar, is slightly raised from it, being supported at four or five points by narrow pieces of steel secured to the face of the finger bar,—thus lessening the fric-

tion,—and the inner face of the fingers is made of steel. The general appearance of the machine is very much like the Wood Mower, and its weight is about the same. Of course it has points of difference, or it could not be patented.

Of the working qualities of the Union Mower we are unable to speak, as we have never seen it in operation. It deserves, as does every machine, a careful examination, and it will take just that position in the estimation of the public which it is entitled by its merits to occupy. No one should purchase an article so costly and of so much importance as a mowing machine, without carefully setting the question in his own mind of the relative value, *for his use*, of the various machines now before the public. The Union is advertised in our columns, and our readers are referred to the advertisement of the manufacturers for full particulars

WEIGHT OF MANURE.—A solid foot of half-rotted manure will weigh, upon an average, 56 pounds. If it is coarse or dry, it will average 48 pounds to the foot. A load of manure, or 36 cubic feet, of first quality, will weigh 2,016 pounds; second quality, 1,728 pounds. Weight to the acre—eight loads of first kind, weighing 16,128 pounds, will give 108 pounds to each square rod, and less than 2½ pounds to each square foot. Five loads will give 63 pounds to the rod. An acre containing 43,560 square feet, the calculations of pounds per foot, of any quantity per acre, is easily made.—*Plow.*

For the New England Farmer.

THE WINTER OF 1861-2.

MESSERS. EDITORS:—To-day we enter upon April, which, according to the old calendar, is the second month of spring. Yet we have anything but spring. Winter holds a princely reign upon these hills. We have had three months and ten days, one hundred days of sleighing, with a prospect of its continuance for some days. Almost one-third of the year! What a long period for the ground to be buried in snow!

It has not been a cold winter. The lowest point to which the mercury has fallen, was five degrees below zero, and this only once. Last year it sunk below that point in each of the winter and the first spring months. Once, you recollect, from ten or twelve degrees above freezing, in twelve hours, it went down, with us, to twenty-eight below zero. This was a rapid and extreme change, and that the coldest morning we ever knew; we said the fruit was used up for that year; so it was, and the old trees were nearly used up, too. So fatal were its effects on them, that many an old orchard has been pruned by cutting down. This year, the trees that remain, we think, will bear fruit. What a luxury it will be, to again have a full supply from one's own orchard. The visions of health and comfort lie in the idea. The winter has approached nearer to an even temperature than any we have had for many years. There has been no very cold weather—none very warm. Our thaws have been short, and of little effect. But very little rain has fallen, and this has mostly congealed as it fell, so that ice on the trees has followed. We have had several hail or sleet storms from the east, and these were usually attended by high winds, so the material was driven into very compact drifts. In the woods these storms formed a crust, very annoying to teams.

The quantity of snow, hail and sleet that has fallen has been large; not less than four or five feet. Much of this material still remains. The roads are full, the fields are thickly covered, and the quantity in the woods is anything but comfortable to man or beast. It is wasting away, but not fast enough to raise the streams at all.

The season has been remarkable for high winds. On the evening of January 1st, the wind, after a pleasant day, sprung up in the north-west and blew a tempest through the night. It was a fatal wind to some apparently strong buildings. The 27th of February was thawy from a south wind and some rain in the early part of the day, but at three o'clock, in the afternoon, the wind came round to the north-west, and attended with a violent fall of snow, blew a tornado through the night. The result was, several buildings were blown down, and the roads and railroads blocked, so that the cars met with serious detention. But two days of calm coolness elapsed, and Boreas started his blast again, and a new and more effectual blockade was laid, in consequence of which the mails were delayed forty-eight hours.

We have alluded to the hundred days of sleighing. This reckoning includes it only from December 20th to the present time, to which add twelve days of sleighing the latter part of November and early in December, and we have had one hundred and twelve days of moving on snow. Ten days more will fill up a third of the year.

Present appearances favor its continuance for that time.

The winter has been very favorable to all kinds of stock, or, perhaps, I should do better to say, that the better care farmers take of their stock, by providing them with warm and dry stables and sheds, shows the good results of improved care in the matter. It has become a principle largely carried into practice, that an animal well protected from the inclemency of the season, is not only cheaper kept, but is more docile and less subject to disease. Many of our best farmers, now, keep their cattle stabled nearly all the while, unless in warm, sunny days, and, in severe storms, go so far as to carry water to their stables.

Warm stables and sheds are doing wonders for the comfort of animals; but in giving them the stables we have been too apt to exclude the light, a quality as essential to animals as it is to plants, and we all know that plants will lose their health and hardiness if grown in the dark. Further, a window in the south part of a stable operates essentially to modify the temperature. The days of winter, we know, are short, and many of them are darkened by clouds, yet light in itself is the herald of warmth, and a little sunshine on a sheltered spot improves the temperature. Then an animal that can see what is going on in the stable loses much of the fear that results from a noise in the dark. It is certainly pleasanter milking and taking the general care of animals in a light stable than in a dark one. No stable is right without its windows.

WILLIAM BACON.

Richmond, April 1, 1862.

EFFECTS OF THIRST.

The oxen had now been four days without water, and their distress was already very great. Their hollow flanks, drooping heads, and low melancholy moans uttered at intervals, told but too plainly their misery, and went to my heart like daggers. My poor horse was no longer an animated creature, but a spectre of himself—a gaunt, staggering skeleton. The change that had come upon him within the last twenty-four hours was incredible. From time to time he put his head into the wagon into any one's hands, and looking wistfully and languidly into his face, would reproachfully (his looks conveyed as much) seem to say: "Cruel man, don't you see I am dying; why don't you relieve my burning thirst?" The dogs, again, ceased to recognize my caress. Their eyes were so deeply sunken in their sockets as to be scarcely perceptible. They glided about in spectral silence; death was in their faces. The wagon was heavily laden, the soil exceedingly heavy, the sun in the day-time like an immense burning-glass, and the oppressiveness of the atmosphere was greatly increased by the tremendous "veldt" fires which, ravaging the country far and wide, made it like a huge fiery furnace.—*Anderson's Okavango River.*

THE WIRE WORM.—At the discussion of a farmers' club in Buffalo, Ill., Mr. Franklin Reed said that the ravages of the wire worm could be prevented by putting half of a fresh cob in each hill. The worm would work into this and leave the corn.

NEW YORK STATE SOCIETY.

Through the kindness of its accomplished Secretary, B. P. JOHNSON, Esq., we have before us the twentieth volume of the *Transactions of the New York State Agricultural Society* for the year 1860. Like many of its predecessors, it abounds in valuable statistical information in relation to the condition of agriculture, from nearly every portion of the State, and is illustrated with well executed engravings of animals, insects and agricultural implements and machinery.

Among so much that gives the experiences of practical men, it is difficult to select and comment. At the evening discussions during the State Fair a variety of subjects were discussed. That upon the Indian corn crop is quite interesting. Several of the speakers, men of large experience, stated it as their opinion that this crop is the most profitable of any of the large farm crops. Mr. T. C. PETERS, of Genesee, said he had tried an experiment to determine the relative value of corn-stalks and Timothy hay. Both were chopped and steamed. The cows having the corn-stalks gave the most milk. He also states what we have often urged upon the reader, that the ground and manure where we expect good crops should both be very fine. Mr. Peters says, "The great secret of success in corn culture is to have the ground made very fine before planting." In company with two other persons, last summer—both very observing and intelligent men—we examined the soil in a field of corn, and came to the conclusion that there was scarcely an inch in the whole field that was not a complete network of corn roots. These roots were exceedingly small and delicate, but so numerous as to hold the soil together so firmly as to require some jarring in order to shake it out. How important it is, then, that the soil into which these delicate roots are to run and seek support, should be fine and moist!

When the subject of sheep husbandry was discussed, Mr. JOHN S. PETTIBONE, of Vermont, said that one great secret of success was the *personal attention* given to flocks—he never knew a man to look at his pig while it was feeding unless it was fine and fat—the man who has poor animals always gives the food and then runs away! He always keeps his best sheep.

Mr. BAKER, of Urbana, maintained that "there is nothing like a flock of sheep to keep up the fertility of the land. Says he has kept 800 sheep a year on something less than 200 acres of land, including the hay and pasture for them; and has made the land so fertile as to raise 120 bushels of shelled corn on an acre. He feeds potatoes, beets, or carrots, to the ewes, twenty days before lambing, and regards potatoes as the richest food, and beets the easiest raised on his land."

Mr. ROBINSON, of the *New York Tribune*, be-

ing called on to state what sort of sheep sell the best in the New York market, said, "South Down sheep always outsell every other variety, to the first-class butchers, but they are not appreciated by the wholesale butchers, who are mostly Irish and Jews. The next most profitable breed for the New York market is the long woolled, heavy carcass sheep." Early lambs will sell for five dollars a head, and later ones for three dollars, if fit for the butcher.

The next paper is upon *Experiments with Different Manures in Permanent Meadow Lands*, meadow here meaning our common upland mowing lands. The first broad conclusion arrived at is, "that it has been shown that the produce of hay on permanent meadow land was more than doubled by means of manure alone."

The reports on farms and the dairy contain valuable suggestions and details of practice. Under the caption, "*Abortive Cows*," six or seven causes are stated that might cause this calamity. These are common things, such as fright, worrying by dogs, hooked by master cows, &c., but the conclusion arrived at is, that, after an examination of all the facts presented, there is good reason to believe that the cause of this disease lies beyond the exciting causes above enumerated. This is a comparatively new habit, is altogether more extensive than farmers generally suppose, and is making sad inroads upon the profits of cows in our own State. There ought to be a thorough investigation of the disease and its causes, by some persons competent for the task.

This volume contains, also, the sixth report on the noxious and other insects of the State of New York, by ASA FITCH, the entomologist of the State Society.

We have been interested and instructed by looking over the pages of this excellent volume, and cannot withhold an expression of gratitude to the State, to the members of the Society, and to the energetic and indefatigable Secretary for sending to the public, annually, a volume so progressive and practical in its character.

SCARCITY OF PURE ARABIAN MARES.

The Arab's love for their mares, and the jealous care with which such animals are treasured in the East, have formed the subject of many an interesting story. There is no difficulty in obtaining any number of Arab stallions, for example, of the very purest blood; but it is next to impossible to procure an Arabian mare of very high reputation. A modern writer on the subject tells us that it is even considered a crime to sell one under any circumstances; and in proof of the resolute opposition to the practice, a case is related as having lately occurred in Calcutta, where some Arabian dealers had sold their horses, and in consequence of a heavy bribe one was induced to part with his mare. Some weeks after, when the dealers had

already gone homeward, the senior of his party was observed to have returned to the city, a distance of several hundred miles; he lurked about for some days; subsequently it was discovered that he had inquired for the stables where the mare was kept; she was found poisoned, and he had disappeared.

For the New England Farmer.

HUNGARIAN GRASS.

MY DEAR BROWN:—I notice in your paper of March 29th, an article on Hungarian Grass, and as all subjects have two sides, it is perfectly proper that both should be presented.

This grass was introduced into our vicinity some few years since, and so loudly were its merits proclaimed that many of our farmers were induced to test its value on their own premises. Being as ignorant of the market price of seed as they were of the value of the article it would produce, they purchased at double the above price, and ventured on the experiment. "Hungarian grass" was then the idea of the day. Mark the change! Last year there were but two individuals, so far as we were informed, engaged in its culture. One of these had a very small patch, the other was a dealer in the seed. The opinions of our farmers go to show that, in their view, it will not pay. We have no doubt, however, but there may be circumstances under which it will pay. What these are, we don't know. The farmer must find out for himself. He is the proper judge in the matter.

But to the objections. It is an annual. Of course it must be resown each spring. Consequently, the ground must be plowed and harrowed—a labor that is not required for the common grasses. Mr. Richards gets "from 1½ to 4 tons an acre." Here is quite a difference in yield, probably caused by the quality of land, amount of labor, and manure, and seed bestowed. The plowing, sowing, harrowing and cost of seed cannot be dispensed with. They are so many extras for the crop. If the same quantity of manure which is necessary to carry the quantity of crop from 1½ to 4 tons on an acre is applied a top-dressing on the meadow, is it not probable it will increase the quantity of good Timothy and red-top in about the same proportion? We think it would, for manure has a wonderful faculty of making these grasses grow, and to make a beautiful, fine hay, that all the cattle and sheep love, and that they will thrive upon. We should decidedly prefer this hay, for our stock, to the Hungarian, and so our farmers decide, who have tried both.

Then, the seed—"from 15 to 25 bushels, weighing from 44 to 48 pounds per bushel." Allowing 25 bushels to the acre, at 44 pounds per bushel, you have 1200 pounds of Hungarian seed to an acre. Add to this Mr. Richards' 4 tons of grass, and you have 9200 pounds, the product of your acre. Eight thousand of this is stalks and leaves. We leave it to the observing farmer to decide the quality of this amount of stalks and leaves, taken from an acre of land. He, too, can decide whether it would be of a quality of food satisfactory to his animals, and what the exhausting power of such a crop would effect on his land.

We have placed the most liberal estimate on

the produce of this crop, on an acre of land. The lower estimates are a ton and a half of grass; fifteen bushels of seed per acre. Any farmer can judge from the extremes of production of other crops, which of these will approach nearest to an average.

"It requires much more drying than herdsgrass does, when cut in bloom." Here, again, is extra labor and risk of weather brought into the expense of the crop. How far all these extra expenses and risks will go to diminish the value of the crop, is a matter of consideration to the farmer, and should be duly estimated before he risks too much. If the author of the article had given us the expense of the crop, such as rent of land, manure, seed and labor, and the value of the crop by the ton or bushel, in comparison with herdsgrass or redtop, and the seed, as compared with oats or buckwheat, he would have given your readers a much better clue to the value of the crop.

"His horses and cattle are as ready for this, when well cured, as they are for other good hay." Ours are as ready for good oat straw, when properly cured, (especially if, like the Dutchman's wheat straw, it is very poorly threshed,) and if fed to them in proper times, as they are for hay. So with corn-stalks, if they are well cured and properly fed, cattle will thrive on them, horses like them, and are benefited by eating them, and great burthens, both of the oats and corn-stalks, can be taken from an acre. Yet we do not recommend them as crops for general culture for the fodder they will produce, though we fully believe that an acre of oats, under equal circumstances, would give a much better return in amount and quality of fodder, than an acre of Hungarian grass, and we doubt not but experience would confirm this opinion with every unprejudiced farmer. ANON.

April 1, 1862.

THE CORAL.

Prof. Agassiz discourses principally concerning the Coral in the May number of the *Atlantic*, relating several interesting facts:—

It is well known that all animals and plants have the power of appropriating to themselves, and assimilating the materials they need, each selecting from the surrounding elements whatever contributes to its well-being. The plant takes carbon, the animal takes oxygen, each rejecting what the other requires. We ourselves build our bones with the lime that we find unconsciously in the world around us; much of our nourishment supplies us with it, and the very vegetables we eat have, perhaps, themselves been fed from some old lime strata deposited centuries ago. We all represent materials that have contributed to construct our bodies. Now Corals possess, in an extraordinary degree, the power of assimilating to themselves the lime contained in the salt water around them; and, as soon as our little coral is established on a firm foundation, a lime deposit begins to form in all the walls of its body, so that its base, its partitions, and its outer wall, which in the Sea-Anemone remain always soft, become perfectly solid in the Polyp Coral, and form a frame as hard as bones. It may naturally be asked where the

lime comes from in the sea which the Corals absorb in such quantities. As far as the living Corals are concerned, the answer is easy, for an immense deal of lime is brought down to the ocean by rivers that wear away the lime deposits through which they pass. The Mississippi, whose course lies through extensive lime regions, brings down yearly lime enough to supply all the animals living in the Gulf of Mexico.

As soon as the little Coral is fairly established, and solidly attached to the ground, it begins to bud. This may take place in a variety of ways, dividing at the top, or budding from the base, or from the sides, till the primitive animal is surrounded by a number of individuals like itself of which it forms the nucleus, and which now begin to bud in their turn, each one surrounding itself with a numerous progeny, all remaining, however, attached to the parent. Such a community increases till its individuals are numbered by millions; and I have myself counted no less than fourteen millions of individuals in a Coral mass measuring not more than twelve feet in diameter."

For the New England Farmer.

PLOWING SONG.

Cheerily, brothers, lift your song,
Let us be blithe and gay!
Gladly the hours should speed along,
For we are plowing to-day.
Drawing the furrows we go,
Full, and straight, and deep;
Mother Earth's bosom the seed will keep
Snug and warm, where the life-springs leap,
Whence a rich harvest shall grow.

Yes, we are plowing again to day,—
Hopeful, and stout, and strong;
The years glide by, we are getting grey,
But in heart we are brave and young!

Steady and brisk we go,
Though the way be sharp and steep,
For mother Earth's bosom, so safe and deep,
The seed we sow will faithfully keep
Till the full harvest shall grow.

So, cheerily, boys, we'll cheerily sing,
Though we miss in our merry round

Voices that once with gleeful ring
Made the whole valley resound.

Merrily on we'll go,
Yet them in our memory keep:
Labor is light where love is deep,—
For them we'll scatter, for them we'll reap,
And theirs shall the harvest grow!

For loudly they shout as they march, to-day,
Over the battle plain,
Dauntless, untiring, amid the fray,
The patriot's proud refrain.

So steadily on we'll go,
Plowing to sow and reap;
Labor is light where love is deep,—
God hath us all in His holy keep,
And this will the harvest show.

So, cheerily, brothers, cheerily sing,
For here shall they stand again,
When the golden autumn fair peace shall bring,
Uplifting a joyous strain.

And hopefully on we'll go,
Plowing, to sow and reap;
Labor is light where love is deep,
God hath us all in His holy keep,
And this will the harvest show.

ANNE G. HALE.

For the New England Farmer.

AGRICULTURAL ACCOUNTS.

MR. EDITOR:—Almost every farmer is now ready to acknowledge the importance of keeping accurate accounts of his transactions, though it is an admitted fact that they do not practice it to that extent which its consequence demands. We never saw a successful merchant who did not conduct his business in a systematic manner, and this is the secret of his success. Without the knowledge which may be thus obtained, it is impossible to determine the cost of raising a certain crop, or whether it is remunerative or not. One farmer will tell you that it costs so much to raise a particular crop, while another estimates the cost at nearly double that amount. Now this is not much better than guess-work, and neither of them knows whereof he affirms, for the simple reason that they both neglect to avail themselves of the only means of coming at the facts, namely, by keeping full and correct accounts.

But my object in writing is more particularly to call your attention to the farm accounts which are published in the Agricultural Reports, a notice of which I hope will suggest some improvements in future published accounts, or bring out such explanation as will make the subject better understood.

In Mr. Secretary Flint's excellent annual, Agriculture of Massachusetts for 1860, I find the following in a statement of a gentleman, of Hampden Co., who asks a premium for his farm management. He credits his farm with—

26 tons of hay.....	\$364.00
Pasturage for 7 cows, 24 weeks.....	84.00
Corn fodder.....	14.00
Swede and flat turnips.....	91.00

Amounting to.....\$553.00

He also credits his farm with—

1200 pounds butter.....	\$300.00
Milk sold.....	50.00
Milk used in family.....	58.00
Skimmed milk sold.....	100.00

Amounting to.....\$508.00
553.00

To which add hay, pasturage, &c., make.....\$1061.00

Now, that is a very pretty item in farm profits, but it seems to me but fair to presume that the dairy product was not effected without the consumption of a portion of the crops of the farm, the amount of which should be deducted from the whole; if not, it is a success in scientific and practical agriculture that will revolutionize the whole system, and render it one of the most successful callings.

The farm is credited with pork and poultry to the amount of \$180, but no charge is made for their keep, which assists very much in making up a good account, and is a great encouragement to amateurs. And \$150 worth of wood is credited as among the crops. Was not the value of the land depreciated by this operation? Thirty-five cords of manure are used upon the place this year, and only one-half of it was charged to the crops, as it was presumed that the remainder went to improve the land. But no account was made of the exhaustion of the land where the hay crop was taken from it, and nothing returned to the soil. \$18 are charged as interest on the value of

the stock, but nothing is said of the depreciation in the value of horses used upon the farm. Now, as it is necessary that farm horses should be removed once in ten or twelve years, it would seem, that the depreciation in their value would be an item worthy of note in a well kept farm account.

Other statements to agricultural societies might be noticed, but I will not detain you with any more details of that kind at present. And permit me to say, that this is not written in a spirit of fault-finding, but with a desire that these reports may be improved, so that they may be more useful to brother farmers; and valuable as works of reference.

MERRIMACK.

West Newbury, March, 1862.

EXTRACTS AND REPLIES.

MIGRATION OF BIRDS.

I think it is a generally received opinion that the birds which are so numerous in the north during summer, go south to spend the winter. There is a gentleman here who is quite observing about the habits of birds, who says that those which are here in summer remain here through the winter. That the robin goes into caves in the mountains, and there remains in a dormant state till spring, and that the swallow goes into mud or water. He says that in the spring, a few years ago, he saw a large number of swallows come up out of the water in a pond in the north part of this State. S.

St. Johnsbury Centre, Vt., May 19, 1862.

REMARKS.—It is clearly settled that most of our summer birds leave us in late summer or early autumn, for warmer latitudes, robins included. Occasionally, a robin may be seen in New England in the winter. Why they remain, we cannot tell. Perhaps, because they are of a late brood, and do not possess sufficient power of wing to join their companions when they move south. Those that remain may be seen of a still, sunny day in the winter, near some thicket of pines or cedars, and perhaps feeding on the berries of the latter. We do not think the robin ever hibernates like the woodchuck or bear.

It is an old belief that swallows go into the mud in the bottom of shallow ponds and brooks and pass the winter in a torpid state, but the more enlightened opinion is that they migrate, most of them leaving New England between the last of July and the last of August.

PURE POULTRY.

The question of Mr. Shattuck is one on which I would like information. I have heard it stated, that, by getting a cock kept out two years, and then let him home, so that he will not run with his offspring, you can keep pure-blooded fowls. I always intend to change cocks once a year, if I can without getting one inferior to my own.

I would like to know how many years of breeding in-and-in it would take to spoil the stock, if the best specimens are kept?

The trouble with many farmers is, they will sell their earliest and best lambs, turkeys, chickens, &c., because they fetch a good price. I have of-

ten heard them say, "these late ones will do to keep over." Often they do not come to maturity sufficiently to stand the cold weather, and, in this way, they will soon run out. Perhaps this is the case with your neighbor's turkeys. I never knew until this spring, that hens would run out so as to be good for nothing. I purchased four of the old-fashioned kind of hens in March; one of them has laid three eggs about the size of robin's eggs, and wanted to set. The others have not laid an egg, to my knowledge; although one visits the nest frequently, and comes off cackling, I never have been able to find an egg.

SWEET GERMAN TURNIP SEED.

Can you inform me where I can procure Sweet German Turnip seed? There is none to be found in Worcester, and I have lost the address of Mr. Coy, and do not know that he keeps seed for sale now. Information would oblige a number of your readers.

N. B. The reply to "Subscriber," in the *Farmer* of April 26, signed "C. K. Hubbard, New Worcester," should read C. K. Hubbard, Worcester.

H. T. GATES.

New Worcester, May 19, 1862.

REMARKS.—We presume the Sweet German Turnip Seed may be procured at the seed stores in this city.

SCRAPING TREES.

Will you, or some of your writers, inform me what special benefit to trees is the scraping off the loose bark or moss from trees about twelve years old? If of any benefit, at what time of the year should it be done?

A SUBSCRIBER.

REMARKS.—While we were engaged in repairing damages to young apple trees, on Saturday last, occasioned by mice or moles, we had the assistance of a practical orchardist, whose views of the management of trees we considered especially sound. Among other questions put to him was this,—What advantage is gained to the tree by scraping it?

The reply was,—“Not any, to my knowledge. Some persons say that insects find a harbor under the bark and moss, but I do not believe they hurt the tree in the least. It seems to me that this rough bark is provided by nature for the protection of the tree.”

His attention was then called to the appearance of the south side of two or three hundred trees, and it was found that on that side, almost uniformly, the bark was very rough, rising in scales from where the limbs start out, to the ground—while on the other sides of the trees the bark was comparatively smooth. We cannot see how the tree is to receive any benefit by the removal of this bark.

Moss on the branches is usually an indication of a slow or stunted growth. Washing this off with strong soap suds—cultivating about the tree, and encouraging it by the application of manure, will be very useful.

THE ENDICOTT PEAR TREE.

I am always happy when my old friend, the *Farmer*, comes to hand. I believe I have read it every week since it was first published by Fessenden—notwithstanding its variation in form. There is something about it that commends it to the New England farmer. There are other papers that I like just as well—particularly the *Country Gentleman*, published at Albany—always sensible and sound; but not quite so well adapted to my instruction. I like the reading on the inside of your paper: it usually gives “multum in parvo,” and saves the drudgery of wading through many pages of trash, for it must be admitted that much which is written for the papers is of this character.

The temperature of my office—78° at this moment—and the temperature of the last night, about the same, give assurance that vegetable growth is near at hand. I have never witnessed a more lovely sight than is spread on the fruit trees in our gardens and orchards. I yesterday took occasion to pass by the Endicott pear tree, now more than 232 years old, (the oldest fruit-bearing tree in the United States,) and although like an old man crippled under the weight of accumulated years, it was still healthy and vigorous with blossoms. This variety of pear is known as the “Bon Chretien,” which speaks well for those who planted it—notwithstanding they had many prejudices. For those who look for perfect characters or perfect trees, I fear are doomed to disappointment. P.

May 17, 1862.

OYSTER SHELL LIME.

Please tell in your June number of the *Farmer* where the oyster shell lime may be found.

Shall we use it on vines and bushes, such as grape, strawberry, gooseberry, &c.? And if so, how and when? SUBSCRIBER.

Saco, Me., 1862.

KILL THE MILLERS.

The following, from a farmer in New Jersey, may be of interest to many. He says: “Some ten years ago, I purchased the property where I now live. The former owner, being quite a man for fruit, had set a large variety of trees. The farm was noted for producing more fruit, and greater variety, probably, than any other farm in the neighborhood. At the time of my purchase, the trees were on the decline. The cherry and plum trees were covered with black knots, and the fruit was wormy and worthless, so that I was about to cut them down and supply their places with shade trees; but disliking to part with the fruit, and observing that the enemies were at one stage of the existence in the form of a miller, my plan was to destroy them while in that stage. With that object in view, and observing that they were fond of a light, in the early part of the summer of 1855, I commenced their destruction. To do this, I elevated a brisk blaze about five feet from the ground, in the vicinity of my trees. The first evening, between eight and eleven o'clock, the millers destroyed might have been counted by hundreds, which gradually diminished, so that, at the end of one week, there were none to destroy. I then discontinued my fire until the latter part of

summer, when I discovered another crop of millers, and again built them a blaze. I have followed the same course whenever the candles have drawn them, to give them a light of their own, which has been twice in the summer. Now for the result: my trees have gradually resumed their former rich green; those knots have fallen from the cherry and plum trees; and this year the crop of Morella cherries has been probably as large as they ever were, and that on trees that were considered worthless five years since, and the fruit, both cherries and plums, not wormy.”—*Essex County Mercury*.

HAVERHILL FARMERS' CLUB.

The enterprising farmers, and others, of the town of Haverhill, formed a farmers' club during the past winter, and seem to have entered at once into a most systematic and vigorous prosecution of the labors and duties which they have assigned to themselves. We have before us a list of the subjects they have selected for discussion during the ensuing season. They are as follows: Fruits; Drainage; Farm Implements; Management of Farm Stock; Manures,—comparative value, preparation and application; Comparative Value of Horses and Oxen for Farm Work; Sheep,—breeds, management, &c.; Small Fruits,—kinds and culture; Transplanting Trees and Vines; Apples,—kinds and culture; Is Farming Profitable? Pears,—kinds and culture; Farm Stock,—comparative value of breeds; Seeds,—how to raise, preserve and select; Milch Cows; Grapes,—kinds and culture; Influence of the Atmosphere on Soil and Crops; Experiments that we have made; Poultry,—breeds and management; Farm Buildings,—their arrangement and construction; Adaptation of Soil and Crops; Rural Embellishments; Garden Vegetables,—kind and culture; Diseases of Trees and Vegetables; Farm Economy; Flow-ers and Ornamental Trees; Noxious Insects; and Are Birds more Serviceable than Injurious to Farmers?

The gentlemen composing this club must possess an unusual amount of zeal, if they attend and keep up the spirit of their meetings during the summer months. We hope they will. In addition to these meetings, there is another feature of their organization which is new, and must be valuable. This is in setting apart a time to meet occasionally, at the farm of any member of the club, with especial reference to an examination, *on the field*, of the subject assigned for the occasion. These meetings are called *FIELD DAYS*. Thus, on the fifth of May, the subject is the *Preparation of the Soil*, and on the seventh of July, the subject for examination will be *Grasses*. In addition to these, on the eighteenth of September, they are to have a *MARKET DAY* and *FAIR*.

If these plans are sustained, the Farmers' Club of Haverhill will afford an example worthy of all

imitation. Some of its members, we know, are not persons to engage in a good cause, and abandon it, short of obstacles that cannot be easily removed.

HOW MUCH MONEY WILL IT PRODUCE?

We make the following extract from an address upon the Agricultural prospects of New England, delivered by the Hon. DANIEL NEEDHAM, at Stanstead, C. E., on the 22d ult. :

"When the young man leaves his New England home, and with wife and children emigrates to the far West, what influences move him? Is it not the bold statement that the virgin soil of that distant land readily produces fifty bushels of corn and forty bushels of wheat to the acre? Is it not for this prospect, that he leaves all his old associations, the land of his birth, the land of abundant schools and churches, the land of good roads and great comforts, to suffer privations in a new country, where school-houses, churches and roads are to be built? The question he should put to himself is, will I better my condition by emigrating? *If the land is more productive of corn and wheat in Illinois, Wisconsin and other Western States, is it more productive of money?* Admitting fifty bushels of corn can be raised to the acre, do we not raise that quantity on many farms in New England? According to the census of 1850, fifty bushels was the average of the State of Connecticut. But if you raise fifty bushels, how much money will it bring? At this very moment, within sixty miles of Chicago, corn can be bought for twelve cents a bushel. Fifty bushels at twelve cents a bushel, will give you six dollars; *and in order to produce this paltry sum of money, you must plow, harrow, hoe, harvest, shell and market an acre of corn.* What will your acre bring you in Vermont? Corn is now seventy cents a bushel;—and if you raise fifty bushels, as you should if you are a good farmer, your acre will produce you *thirty-five dollars.*

How is it with wheat? Wheat is now worth within sixty miles of Chicago, sixty cents a bushel. The average crop of Illinois is less than twenty bushels; and for your acre you will realize less than twelve dollars. In Vermont, our average crop is seventeen bushels, which to-day is worth one dollar and twenty cents a bushel, yielding for the acre, twenty dollars and forty cents.

But suppose you convert your corn into pork, will that help the matter? Pork has been selling this entire winter, within sixty miles of Chicago, at two cents a pound.

The man who leaves Vermont and goes West to get rich by agricultural industry, makes a sad mistake. Northern men have gone West and secured wealth, but it has been by fortunate investments in real estate. Such men can be found in every school district of our State, men who by fortunate speculations have amassed wealth. But the time is far in the future, when men, by legitimate agricultural industry in the West, will reach the coveted goal of wealth."

PERFUMES.

The chief places for the growth of the sweet perfume-producing flowers are Montpellier, Grasse, Nîmes, Savoy, Cannes and Nice. Nice alone produces a harvest of a hundred thousand pounds of orange blossoms, and Cannes, as much again, and of a finer odor. Five hundred pounds of orange blossoms yield about two pounds of pure Neroli oil. At Cannes the acacia thrives particularly well, and produces yearly about nine thousand pounds of blossoms. One great perfumery distillery at Cannes uses yearly about one hundred and forty thousand pounds of orange blossoms, twenty thousand pounds of acacia flowers, a hundred and forty thousand pounds of rose leaves, thirty-two thousand pounds of jessamine blossoms, twenty thousand pounds of tuberose, together with a great many other sweet herbs. The extraction of ethereal oils, the small quantities of which are mixed in the flowers with such large quantities of other vegetable juices that it requires about six hundred pounds of rose leaves to win one ounce of otto of roses, of course, demands a very careful treatment.

Nice and Cannes are the paradise of violets, producing annually something like thirteen thousand pounds of blossoms. The variety cultivated is generally the double or Parma violet, which is so productive that the flowers are sold at about five pence per pound; and we all know what sort of bouquet a pound of violets would make.

The abundance in Sicily of every flower which in our climate is most highly prized, recalls the traveller in the story, who arrived in a country where the children played at pitch-and-toss and marbles with diamonds, rubies, emeralds, and other precious gems: "These are, doubtless, the sons of some powerful king," he said, and bowed respectfully before them. The children, laughing, made him soon perceive that they were the street-boys, and that the gems were only the pebbles of that country. In Sicily the crimson grenade and rose trees, the peach-colored rhododendrons, and the delicate white camellias, form the country hedges. The white and green myrtles, and pink, white, and flame-shaped and flame-colored tulips, grow wild. When a pleasure-garden is made, the orange and lemon trees are taken out because they are too common. By the same rule, very few people trouble themselves with flowers—they are too vulgar. Alphonse Karr was much surprised to notice that the ladies of Nice never decorated themselves with real flowers, but seemed to dislike them. He observes this is all the more strange in a country where it is no longer a mythological flattery to say that flowers spring from under the ladies' feet. The roses, violets, jessamine and mignonette are cultivated only by the peasants for perfumery purposes, and honored but as we honor potatoes or cabbages.

We are now wholly dependent for our finest perfumes on France, so that when the crop of a flower fails, as did that of the jessamine last year, it will put the manufacturers to serious inconvenience. It would, therefore, be the interest of perfumers to promote the production of those flowers in other countries; and the high price they fetch in the market would make it a very profitable speculation. It has been proposed to cultivate flowers in England on a large scale, for perfumery purposes, but the climate renders this scheme to-

Keep no more stock than you can keep in good order, and that of the best kind.

tally impracticable. For English flowers, however beautiful in form or color, do not possess the intensity of odor required for extraction; and the greater part of those used in the south of France for perfumery, would grow here only in hot-houses. The one flower which might be had in abundance would be the rose; but the smell of it is very faint compared with that of the southern rose. Add to this the shortness of the flowering season, and the high price of land and labor, and it may be safely said that the cultivation in England of flowers for perfumery would prove as bad a speculation as attempting to make wine from English grapes.

The most widely-known of the toilet-waters having an alcoholic basis is the eau-de-Cologne, invented in the last century by an apothecary in Cologne. It can, however, be made just as well anywhere else, as all the materials come from the south of France and Italy. Its perfume consists principally of the flowers, leaves and rind of the fruit of the bitter orange-tree.—*All the Year Round*.

For the New England Farmer.

SMITH'S PATENT FENCE.

MR. EDITOR:—The *Farmer* for May, 1862, contains a communication from some one in South Amherst, in relation to my fences, in which he expresses the opinion that the patent can be evaded by omitting the preparation of the posts.

Even if this could be done, it would not be for the interest of any farmer to do it, as unquestionably the fence will last three times as long with the ventilated posts, as it would without them. But it is certain that no one can lawfully build the fence by dodging that claim. I have the written opinion of the ablest Patent Solicitors in the country, that the claims of my patent will give me all the protection I shall need.

Without wishing in any way to include my humble self among them, I will say that scarcely any class of persons have done more to advance the material interests of our people, and to give our country a name and fame among the nations of the earth, than American Inventors. And yet, there is scarcely one who is the author of any very important improvement, but whose rights have been questioned, and in many cases with about as much of justice as the rights to the tempting cargo of any vessel are liable to be questioned by every pirate rover of the seas.

If the gentleman is really "a farmer," and will send me his name, I will give him the right to build the fence, to keep him out of the way of temptation.

INJURY TO FRUIT TREES FROM MICE.

For several years I have used shingles tied around the trees, and when well done, have never had a tree injured. The mice live in the ground, and I think always begin their depredations close to the ground, and work up, and the shingles will prevent them from doing so. Strong twine will last about two years; small wire, put on loosely, several years. A wash of cattle manure and clay, made thin with water, and applied to the bodies of the trees with an old broom, will prevent sheep and calves from gnawing the bark for several weeks.

CHARLES R. SMITH.

Haverhill, N. H., 1862.

PEARS --- THE SLIMY SLUG.

One of the worst enemies with which the cultivators of the pear have to contend is the "Slimy Slug"—(*Selandria Cerasi*.) They generally make their appearance in vast numbers, locating upon the upper side of the leaf, and eat it until it presents the appearance of a piece of coarse muslin, nothing but the fibres being left. Consequently they cripple the tree, and destroy the fruit if not immediately checked. In appearance they very much resemble the tadpole, are of a dusky brown color, and from an eighth to half an inch in length. Downing, on page 328 of his "Fruits and Fruit Trees of America," and Kenrick, on the 55th page of his "Orchardist," mention this insect, and both recommend about the same means for its destruction. Whale oil soap, applied with a garden syringe, is perhaps one of the most effectual remedies that can be applied to pear trees infested with this enemy; but a writer in a late paper recommends the following as the most effectual method of destroying them:

"Take a piece of very coarse cotton cloth, say about twenty inches square, and tie up the corners of it, enclosing one or two quarts of air-slacked lime or unleached ashes. Make this fast to one end of a long, light pole, and in the morning, while the dew is on, elevate the sack of lime above the topmost branches of the tree, striking the lower end of the pole with a small mallet occasionally, and moving the pole or sack about till every leaf is finely dusted over with the lime or ashes. This operation need not be repeated if once thoroughly performed. The time requisite for a full-grown pear tree is not over five minutes."

It is an excellent plan to scrape the bark of pear as well as apple trees early in the spring, and wash them thoroughly after scraping with a mixture of soft soap, ashes and green cow-manure. The wash, however, should not be so thick as to form a coat on the surface, as all obstructions of the pores should be by all means avoided. Like the human skin, the bark of trees has a very important function to perform, and any interruption of its natural offices will inevitably prove an injury to the tree. If you can procure it, a few quarts of the rubbish from the blacksmith's floor, consisting of fine cinders and iron scales, will be of great benefit to your pear trees. The soil should be opened, and the rubbish scattered evenly around the trunk, and in contact with it. Lime is also beneficial.—*Cor. Germantown Telegraph*.

HAY SPREADER AND TURNER.—Mr. Moses Mandell recently showed us a model of E. W. Bullard's Patent *Hay Spreader and Turner*, and from examination given it, we came to the conclusion that it is a machine of practical utility. It is simple in construction, portable, and may be managed without difficulty by any person capable of using a common horse rake. Several farmers of the fine farming town of New Braintree, certify that it will perform the work of ten men, and at the same time do the work better than it is done by hand. We have no doubt that it is an excellent machine

THE SEASON AND PROSPECTS.

The large quantity of snow that "lingered in the lap of spring," melted gradually away and kept the ground saturated as long as it lasted. Since this supply has ceased, there have been but few spring showers, so that we began to feel the effects of an early drought. By the twentieth of May, the young clover began to droop in dry places, and the dust in the streets and on high land fields, when harrowing, seemed to be as thick and active as in midsummer.

The drought—we are informed by a gentleman just from New Hampshire and Vermont—has pinched more sharply there even than in Massachusetts. He also states that farmers were planting in their fields, while huge snowbanks were piled on the hillsides, or in the valleys, within sight! Such a scene, we presume, is not often witnessed.

On the night of Saturday, May twenty-fourth, there was a sharp frost in all the region about Boston, which was quite destructive to the early corn, potatoes, beans, tomatoes, and other tender plants which had been brought forward by extra care to supply a waiting market. The blossoms and young leaves of the forest trees, were also destroyed wherever they came within five or six feet of the ground. On Monday, the 26th, they presented an appearance of having fire run through them.

On Tuesday, the 27th, there was a copious and delightful rain, which fell steadily and slowly through most of the day, reviving the face of nature, and causing the world to look as beautifully as the most active imagination could well conceive. This gladdening of the earth went up, also, to the hearts of men, so that every countenance was radiant, and all for a time forgot the discomforts of a new call "to arms," and rejoiced in the sunshine that broke out anew upon the refreshed land, teeming again with new life.

The promise, now, for good crops of all our agricultural products, is cheering. The blossoming on all our fruit trees has been profuse, and the timely rain has aided the setting of the young fruit, which now appears remarkably well.

Planting has steadily progressed, so that now, Monday, June 2d, it is nearly completed, while some of the early crops have already had a first hoeing. A wide breadth has been occupied with wheat, corn, barley and potatoes, and with careful culture and the blessing of Heaven upon them, our average products will not be decreased in consequence of so many of our farmers being absent in the "tented field."

In England, by the latest reports in our foreign exchanges, the prospects still remain rather gloomy. Heavy rains, and in some districts severe storms have succeeded the early cold and

wet weather. English writers are "startled" at the fact, "that accumulated stores in the lake ports will enable shippers to send on *greater* quantities than were last season supplied to Europe." England ought to know us better than she appears to. She is able to purchase maps, and study them, and she has intelligent persons continually travelling among us,—and yet, from reading the *London Times*, one would suppose that its writers had rarely seen a geography, or consulted a map of the United States! Is this ignorance, or a wilful perversion, intended to mislead the readers of that influential journal? The "startling" intelligence in relation to our resources in breadstuffs, is one of the evidences that England does not appreciate us, either in our intelligence, our resources in the grand staples that go directly to sustain life, in our ability almost to speak into existence the military implements necessary to resist or repulse any foe, or to fill the hands of seven or eight millions of freemen who love liberty better than life without its blessings. No people on earth, probably, are so independent of all other people, as those of the free States of this Union. God grant that we may use our great privileges wisely and well, living firmly up to our doctrine, never to aggress upon others, nor to yield the rights which are clearly our own.

For the New England Farmer.

FENCES.

Much has been written about fences. I would recommend a very cheap one, that will require as little ground as any other, made as follows: Prepare good straight stakes five feet long; steep the lower end in blue vitriol liquor, one pound to five gallons water; set the stakes one foot deep in the ground, on a straight line or otherwise, eight inches apart; saw off the tops even, and nail a strip of board two inches wide on top; put one nail in each stake, and the fence is finished. If the frost should lift the stakes, they may be easily driven down.

There are thousands of miles of fence needed on land where it would be impossible to obtain boulders to fasten the posts of Mr. Smith's patent fence to. I don't understand how he is going to tie his braces to the boulders with a wire. I should think his boulders and braces must take up at least one foot of ground on each side which is too much to waste.

Another kind of cheap fence is made horse-rack fashion, with spindles one inch square, three feet long, and eight inches apart, the ends of the rails halved and pinned together, and a pair of stakes set at the end of each length, with a withe on top. Set the fence on a stone or block, eight inches from the ground; this fence is very convenient for removing, if necessary.

Another fence I like very much for a garden or outside fence; place boulders at a proper distance, drill a hole four inches deep; place an iron post seven-eighths or one inch diameter, and fill with melted brimstone; the rails may be two by three

inches square; bore with an augur of a suitable size so that the bottom rail will "stay put," and not split the rail; bore the top rail not quite through, say minus one-half inch; nail on slats from one inch to four inches wide, and from two to four inches apart; paint the top, or saw it square, or put on a cap.

JAMES PALMER.

South Hampton, N. H.

For the New England Farmer.

MENTAL CULTURE.

MR. EDITOR:—Your remarks upon this subject, in the calendar for February, were perused with much pleasure, not only by myself, but doubtless by all of your many thousands of readers. While reading these remarks, I felt an irresistible desire to write something in confirmation of the truths therein contained.

It has always seemed to me that the practice of writing down our own individual thoughts upon any given subject—especially if those thoughts are intended for publication—is one of the best, if not the best means by which we can become thoroughly acquainted with that subject. For if a person is writing an article for the public to read, he will naturally strive to make correct and reasonable statements, and this desire will cause him not only to search every nook and corner of his own mind and experience for ideas, but everything relating to the theme under consideration, whether found in book, paper, lecture, sermon or conversation, will be eagerly grasped at, and woven in with his own thoughts, in such a manner that it becomes, as it were, a part of his own mind, and makes an indelible impression upon his memory. This digging out and bringing to the light our own ideas upon a particular subject, comparing them with the thoughts of others, and treasuring up the observations and best thoughts of other minds, is an exercise which greatly strengthens and enlarges the mental faculties. And this discipline, either in the form of writing, public speaking, or instructive conversation, is one which every mind *must* go through, or it cannot arrive at even a moderate degree of mental culture.

The minds of some people are like a riddle-sieve; they are always hearing and reading, but the facts, fancies, or whatever they listen to, leak out as fast as they come in. Such persons are, virtually, without any minds; but by the simple process above mentioned, it is within their power to possess this important article.

There is another class whose minds are like a stagnant pool—continually receiving the rains and streams, but having no outlet. The above process would also benefit this class of individuals.

There is another class still, whose minds have no outlet or inlet; who shut out all light and knowledge, especially that which is derived from books, papers, lectures, and similar modes of mental improvement.

These last mentioned individuals are in a more hopeless condition than those who belong to either of the other classes; but a vigorous, and continued pounding upon the hard shell in which their dark thoughts revolve, will finally cause it to yield.

Although it is evident that a large portion of the farmers and mechanics of our land possess

great and increasing desires for knowledge and self-improvement, yet the fact is also equally certain that another large portion have no such desires, but, in many cases, a positive aversion to everything like study, or a close and continued application of the mind in one direction.

By reason of their ignorance, these last named persons usually regard the contents of books as of little value, not knowing or considering that the best thoughts and most valuable experience of wise, learned, and gifted minds are treasured up in these storehouses of invaluable knowledge, the destruction of which would cause the world to recede backwards many degrees in the scale of human progress. Of course, I do not mean to say that *all* books are thus valuable, for many, very many, are worse than useless, and the sooner they are burned, the better,—but only those which are strictly moral in tone, and which contain important thoughts and useful information, whether in the form of fiction or actual fact. How many farmers, mechanics, and other laboring men there are, who prefer to spend their evenings and other spare hours at the store, bar-room, or other public places, listening to, if not taking a part, in the idle, coarse and vulgar talk so frequently heard in those places, rather than to remain at home and hold converse with noble and intelligent minds through the medium of books, or write down their thoughts and observations for their own good and the benefit of others.

Although a great many towns and villages have purchased agricultural and miscellaneous libraries, and much good has been done through their agency, yet, in more than one town, I have known some of the most valuable books in those libraries to remain for years, with their leaves uncut! I hope and believe that these are exceptions to the general rule, but if not, it seems to me that the object for which these libraries were procured is not being fully accomplished.

To enable a person to make any perceptible progress in mental culture, one or two hours of each day should be devoted exclusively to that object. But, says some hard-working man, how *can* I find time for this purpose? The evening is the only part of the twenty-four hours that I am not at work, and then the children make such a noise that I cannot call my thoughts together; and oftentimes a neighbor drops in and interrupts me; or I am too tired and sleepy to apply my mind to any subject. Such individuals should have a study or room by themselves, and nothing but the most imperative duty should be allowed to disturb them during the hours which they have set apart for self-improvement. This plan may cause an incredulous smile to overspread the countenance of some conservative farmer, and he will probably set me down as a *humbug*, but the plan may be a good one, nevertheless. Men in other professions have their places for retirement and study; why should not the farmer, the mechanic, and all other men, or women, who belong to the laboring class? But, says one, *all* cannot be learned; the working classes must ever remain in comparative ignorance. That there may be some truth in this assertion, I admit, but not so much as most people imagine.

Let us look at the laboring classes in some of the older countries of civilized Europe, and compare the amount of knowledge and mental culti-

vation which they possess, with that of the working men and women of our free States. Is there not a vast difference? And what has made this difference? It is our free schools, free libraries, free speech; our habits of reading, our public lectures, and various other established modes of imparting and receiving instruction in every department of knowledge and literature, which have placed the laboring classes of the Northern portion of this country far above, in point of intelligence, the common people of every other land.

The question now arises, Have we, as laboring men and women, yet reached the highest round in the "ladder of learning," which it is possible for us to arrive at? I, for one, think we have not. If the "good time coming," of which the Hutchinson family used to sing, ever comes to bless mankind, it will not be until the minds of the common people arrive at a state of mental culture, intelligence and goodness, greatly surpassing anything which the world has yet witnessed.

South Groton, 1862.

S. L. WHITE.

THE EAGLE'S STRATAGEM.

As the mountains around the Konigs Sea abound in chamois, the eagle very naturally resorts there; and opportunity is frequently afforded of witnessing his tactics, modified by circumstances. The following account gives an instance of most cunning stratagem; but it also shows how impotent for attack the eagle is when his victim is not entirely exposed. A good sized chamois buck had got upon a ledge of rock, and was gazing downward and about him as these animals like to do. An eagle perceived him; but as the bird could not approach close to the rock on account of his breadth of wing, he resolved to obtain the prize he had marked as his own in another manner. So he sailed by the chamois on his narrow path as near as he dared come; then again and again; and as the animal retreated in order to quit his perilous position, the eagle, wheeling round in a smaller circle, met him instantly, to hem in and cut off his retreat. By thus rushing past within a few feet of him, and filling him with terror, he hoped to bewilder the chamois, and cause him to fall over the precipice, in which case he would have but to descend, and carry off his booty. And in fact, the chamois, from trepidation probably, in turning a corner, slipped with one hind foot over the ledge. He lost his balance, and fell headlong over the rock, as the eagle intended that he should. But after lodging for a short time on an intervening slope, the carcass rolled off, and came toppling down into the lake. The whole proceedings had been watched by two persons in a boat. They now rowed across to get the chamois; while the eagle, disappointed of his victim, wheeled above them, watching all they did.—*Forest Creatures*; by Charles Boner.

HOW TO CATCH SKUNKS.—Every man may catch his own skunks. I have just discovered a new and novel trap for catching these pesky animals. I take an old flour barrel, tack my bait in the bottom, and lay it on two blocks, about six or seven inches high, one of which is near the centre; the skunk goes in, steps over the fulcrum, and the barrel rights up on its end, with the skunk in it.

He can readily be disposed of by throwing him into the water, and then shooting him. I have taken five within a few nights. This is safe against cats and other domestic animals. Try it.—*Cor. Ohio Farmer.*

For the New England Farmer.

RETROSPECTIVE NOTES.

"HINTS ON BUYING FARMS."—The article with this heading in the number of the monthly edition of this journal for May, and in the weekly of March 29th, is so complete in its enumeration of the several most desirable qualities in a farm, and so judicious in all the directions and remarks which it contains, that to any one—especially any young man—about to purchase a farm, its value would be *very great* indeed. Let any young man about to select a farm, which he intends to make his home for life, "read, mark, learn and inwardly digest" the several hints and items of information in this article, and he would almost certainly escape making some sad blunder or oversight, which might be a source of regret, loss, and annoyance all his life, and for ability or opportunity to correct or nullify which he would willingly pay perhaps hundreds of dollars. The writer of this knows more than one individual to whom these directions would have been worth a good many hundred dollars, as they would have saved said individuals from oversights or neglects of important points in purchasing a farm, which have been a source of regret and much inconvenience and disadvantage ever since their selection and purchase were made. Probably, a good many of the readers of this journal know of similar cases among their neighbors, or may even be so unfortunate as to be conscious that they themselves have made blunders in the selection of their farms, such as they might have avoided if they had only had the benefit of such hints as are furnished in this article. A copy of these "Hints on Buying Farms" would have been cheap to a great many, at the time of purchasing their farms, if they could have been had at any price from fifty to five hundred dollars. If the oversights and neglects, or downright blunders, made for the want of just such hints and just such information as are furnished in this article, could *now* be atoned for or nullified by the payment of any sum within the range just named, there would be not a few who would be ready, at such a price or even a higher one, to redeem their errors in the past.

Might it not, therefore, be an undertaking of great benefit to young farmers—though, perhaps, of no great profit to the author or the publisher—if these "Hints," somewhat enlarged, perhaps, were put into a convenient form, such as a vest pocket manual, or a tract, and put in some way within the reach of all who may soon have to encounter that difficult, and often ill-executed operation, the selection and purchase of a farm? Every farmer in New England, as well as in other regions of country, might subscribe for a dozen or a score of copies of such a tract or little manual, and, by distributing them among his sons, hired men, and others, be doing a large amount of good at a very small cost. But until this article shall have been printed separately, those disposed to confer such a favor on any decent and deserving hired man, or other young person, must give it to them, or refer

them to it, as we now have it, in the fourteenth volume of the *New England Farmer*. This single article is worth more than the price of a whole volume, and may be, and will be, we trust, to some young men, worth more than the price of all the volumes of this journal which may be published during their life-time.

CONCENTRATED MANURES—WILL THEY PAY?
The communication with the above heading, from the pen of THOMAS ELLIS, of *Rochester, Mass.*, is worthy of consideration by practical farmers, especially in these days when *puffing* is so extensively practiced, and certificates seem to be so readily obtainable, on two accounts at least. This communication may be found in the weekly edition of March 29th, and in the monthly for May; and is noteworthy, as we have said, on two accounts: First, for its candid and discriminating estimate of the real purport and value of the mass of certificates and reports of experiments with concentrated manures, in regard to which Mr. E. testifies that among all that have fallen under his observation, he has as yet seen none which prove the first thing which a practical farmer wants to be assured of, viz., that they will pay. He admits that they all agree that these manures will cause vegetation to start rapidly, and usually to produce more or less increase of crops, but fail to show that the increase in the crops will pay back the money invested in the fertilizer used. So far as ordinary farm crops are concerned, excluding from present consideration garden produce and farm crops of an extraordinary kind, or in extraordinary circumstances, there is just such a want of proof that investments in manufactured fertilizers will pay, as is asserted by Mr. Ellis. Prudent and practical men, therefore, and all who farm for a living or for profit, ought to feel under obligation to Mr. Ellis for opening their eyes so that they may see more clearly the rather ambiguous, (if not sometimes, also, the deceptive,) and entirely unsatisfactory character of the most of the certificates and reports of experiments which are put forth so abundantly by those interested in the sale of manufactured manures. The just inference from the observations of Mr. E. is this—that it is the dictate of prudence not to spend money for manufactured manures until there is more satisfactory proof that they “will pay.”

The second of the reasons referred to as making this article by Mr. E. worthy of attention, is, that it furnishes one instance and proof of the not unfrequent unprofitableness of applying manufactured manures to ordinary farm crops. The increase of corn thus obtained by Mr. E. cost him, in one case \$7 per bushel, and in another 84 cents. There is need, then, of caution and prudence, at least.

MORE ANON.

THE *Progress*, of Lyons, states that an engineer has just discovered a Celtic barque sunk in the mud in the Upper Rhone, which is supposed to have remained there, in a bed of sand and gravel, for several centuries. The barque is a single piece of timber, hollowed out like an Indian canoe. It measures 27 feet in length and 8 in breadth. The wood of which it is composed is completely petrified. This curious vestige of the navigation of the Allobroges is to be placed in the Museum of Lyons, where it will be conveyed on one of the rafts which descend the Rhone.

For the New England Farmer.

SPREADING MILK---CRIBBING.

MR. EDITOR:—I have a very valuable heifer whose milk spreads so bad that I can hardly hit the pail. Will some one tell me a remedy for it? Crops in this part of the State are looking well. Grass, for the time of year and lateness of the season, looks finely. Apple trees, big and little, all sorts and kinds, are in full blossom, and if we have nothing to blight them, we shall have such a crop as will be long remembered.

I have been much pleased with the receipts that have been given in the *Farmer*; some of them are worth the price of subscription alone, but I think I could suggest an improvement to those who give the receipt, to give the manner of making and applying the remedy. The remedy may be an effective one, yet still of no use, because we do not know how to make and apply it. Among all the receipts given I think I have never seen one for

CRIBBING.

This disease originates from a sour stomach. First caused by a habit of biting the crib whilst eating, and in so doing, the horse swallows wind, which causes the stomach to become sour. Over-eating and drinking would aid in this disease. A horse with this disease is the same as a person who, after eating, belches up wind from the stomach, and will, in time become a dyspeptic.

Cure.—Take one tablespoonful of pulverized charcoal, one teaspoonful of sal soda, mix in a gill of corn meal, and give three times a week until a cure is effected, which will depend on the length of time the horse has been addicted to the habit. The horse should be fastened in the middle of the barn floor by a rope from the beam overhead, so that he cannot get hold of anything to bite, and feed him from a basket fastened on the head. It is said by those who have tried it to be a sure cure.

New Hampshire, 1862.

M.

REMARKS.—One leading cause of the habit of “cribbing,” is in the irregularity of feeding, and in not satisfying the appetite of the animal. If a horse is fed liberally and regularly, we doubt whether he will ever contract the unpleasant habit of “cribbing.” Is it not the neglect of this regularity and supply that occasions the “sour stomach?”

EFFECTS OF LIME WATER.—It is well known that the water of several of the Middle and Southern States is largely impregnated with lime, the effect of which is to impair the normal action of the alimentary canal. Already our troops have begun to suffer from drinking it, as we learn from various sources. A gentleman of this city, who has travelled extensively in the lime-water region, informs us that he made constant use of vinegar with success as an antidote to its effects. He used about a teaspoonful of vinegar to a common sized tumbler of water. It is his opinion that any other kind of acid will have the same beneficial effect which he realized from the use of vinegar. We hope our soldiers will practice upon this suggestion.—*Fall River News.*

For the New England Farmer.

ARE BAROMETERS WEATHER-WISE?

MR. EDITOR:—Barometers are not omniscient, as your Vermont correspondent, A. G. Dewey, justly intimates. All they can do is, to weigh the atmosphere over the place where they are hung. This indicates something, but not everything. A sudden fall of the mercurial column shows a sudden diminution of the atmospheric column over it, and this implies that there will soon be a rushing in of the heavier air around. This may prove to be only a squall of wind, or it may be accompanied by a thunder storm. If the barometer sinks slowly, day by day, a rain storm may be expected, if it falls considerably; but after a slight descent it may alter its course and go up again, and no rain will fall. Easterly, drizzly rains on the seacoast are not indicated by the barometer, for they come merely from the condensed, moist air from the ocean, and there is no change in the atmospheric pressure necessarily preceding this drift current.

There are other things to be considered in our endeavors to foretell the weather, and I would advise your correspondent, and all farmers, to read Daniels' Meteorology, so as to fully understand the subject. After observing the barometer, a record of it being regularly kept, let him also ascertain the dew point, or the temperature at which the atmosphere deposits its aqueous vapor. This may be very readily effected, by taking a silver or a tin cup, and after first ascertaining the temperature of the air in the shade, let him put some water into the cup, with a piece of ice, and stir it until moisture begins to deposit on the outside of the cup, when the thermometer, placed in the water, will give the temperature. This is the deposition point. Now throw out the ice, and wipe part of the cup dry, and wait until after the deposition of a slight film of moisture, it again disappears. This is the vaporization point. The mean between the deposition point and the vaporization point is the true dew point. Compare this with the temperature of the air, and note the difference. Suppose it to be fifteen degrees. Then the air must be cooled to that extent to cause it to deposit moisture, or to rain. If the difference between the dew point and the temperature of the air is but a few degrees, there is a high probability that rain will soon fall.

If the observations are made in the morning, since the heat will augment, as the sun approaches meridian, the chances of rain will be diminished, by this increasing warmth, but if afternoon, for opposite reasons, the probability of rain will be much increased. Indeed, if only four or five degrees of difference between the dew point and the temperature of the air exists, it will be almost certain to rain.

The wet and dry bulb thermometers will answer the same purpose, and since the wet bulb gives the temperature of the vaporization point, and the dry bulb gives that of the air, nothing more is required than to observe them and note the difference of temperatures they indicate.

More reliance may be placed on this method than on any observations of a barometer, but still, it is useful to consult both sets of instruments. The thermometers cost so little, that every farmer can afford to own a pair of them, and after a lit-

tle experience in determining the dew point, and making his deductions, he will surprise his neighbors by his weather wisdom, and also be a gainer by saving many a load of hay.

Where no instruments can be had, by simply observing whether a wetted and wrung out handkerchief dries rapidly or not, some idea may be gained as to whether the atmosphere is saturated with moisture or not. When you have to wait a long time for ink to dry on your paper as you write, you may feel sure that the air is very moist, and but a little cooling is required to cause it to deposit moisture, or to rain. The spider is a weather-wise from instinct, and does not spread his web on the grass, or over his hole when it is about to rain, but is an early prognosticator of fine weather as he lays out his net on the dewy grass of the morning.

Our senses and instincts are not so fine, and we need the aid of instruments, but they will not serve us if we don't understand the philosophy of the matter, and apply our reason to the solution of the problem. We must have good instruments, and know how to use them, or the wisdom of the spider will put us to shame. You will see at once, Mr. Editor, that it is knowing how to use instruments, that renders them available, and the farmer who rails at meteorological instruments reminds me of the Indian, who, having seen white men observe the indications of a compass, bought one to enable him to find his son, who was lost in the woods, and followed the direction indicated by the north point of the needle, in search of him. Not finding that the instrument pointed out where his lost son was, he indignantly dashed it to the ground and destroyed it, calling it a liar, and venting much abuse upon it!

A man who buys a barometer, marked with "fair, change, rain," &c., and consults its markings without taking into consideration its elevation above the sea, and the various causes which operate upon the mercurial column, and takes no note of the temperature, dew point and course of the wind, but condemns the instrument, when he does not know how to use it, reminds us of the Indian above alluded to, and is equally wise. C. T. J.

REMARKS.—The above is from the pen of a close observer, both in nature and science, and from a sincere and earnest friend of the farmer. While it elucidates principles, it contains simple and impressive illustrations, beautifully expressed, in some of the most common things of the farm, which all may observe if they will. We cordially thank him for his appropriate and timely remarks.

MANAGEMENT OF MUCK IN YARDS.—From an article in the *Homestead*, on "The New England Barn-yard," we copy the following:

The true manure-making period of the year, in the open yard, is indicated by, and perhaps begins and ends with the corn-growing season. That is, muck does not rot in the yard while the temperature is too low to favor vegetation, and is perhaps ameliorated more by exposure during June, July, and August than through all the balance of the year. The amount of droppings from cattle is usually the greatest during those warm months,

while they are not tied in the stable at all. The farmer who wishes to manufacture his manure of an even quality will give as much of the month of May as possible to the absorbents already in the yard, and will also endeavor to clean and replenish the second time as near the first of September as practicable. By this method he may get two crops of manure yearly.

MOWING MACHINES ON SMALL FARMS.

In one of the Legislative Agricultural meetings which took place at the State House in March last, when the topic under discussion was that of *Farm Implements*, one or more of the speakers stated that they thought mowing machines were profitable on large farms, but on small ones would hardly pay.

We thought, at the time, that this was an erroneous view of the matter, and upon farther reflection, we think so still. The farmer who has a large farm, is presumed to have capital corresponding with his acres, and to devote his whole time to the management of his estate. He is never *single-handed* and *alone*. If sick, or disabled in any way, he has strong backs and stout arms to depend upon, in his hired men, still to carry on the cultivation of the crops, or to secure the harvests. He can even visit the seashore or the mountains, and be absent for several days in succession, without any special detriment to his farming operations. His corn and roots are hoed and kept in a flourishing condition, and his hay, and wheat, and rye crops, carefully secured, so that he finds loaded scaffolds of golden grain, and bursting bays of aromatic hay, all safely housed, to gladden him on his return.

If he has used a mowing machine, all this labor has undoubtedly been greatly facilitated, and the crops have been economically secured. But suppose he has not availed himself of this labor-saving implement—he has had, and always can have, a force, in athletic men, equal to all the demands upon him. If there is any class of our farmers who can dispense with the mowing machine, and not most sensibly feel its absence, it is this that we have described. This class may be independent of the machine if it will, but not without loss.

Such, however, is not the case with the small farmer. His whole success is centred in his own judicious management, aided by his own muscular power. The hard jobs, as well as the easy, and all the duties that incessantly come, both late and early, are also his. His sons may be in the army, factory, or behind a counter, all but the youngest, who is only fourteen, and yet has swung the scythe the two previous years.

Perhaps the farmer is considerably past middle life, and although in good health, his cheek is furrowed, and grey hairs sprinkle his temples. It is

true that the grasshopper is not a burden to him yet, but he does not feel like cutting his acre before dinner; he stops to whet oftener than he did twenty years ago, and rests longer in the shade of the big apple tree! In fact, his "mowing machine" does not work as it formerly did. There is plenty of will, but less power, and the work progresses slowly, while he looks painfully around to see what he can call in to his aid, to secure the crops which beneficent Heaven has matured for the support of his family.

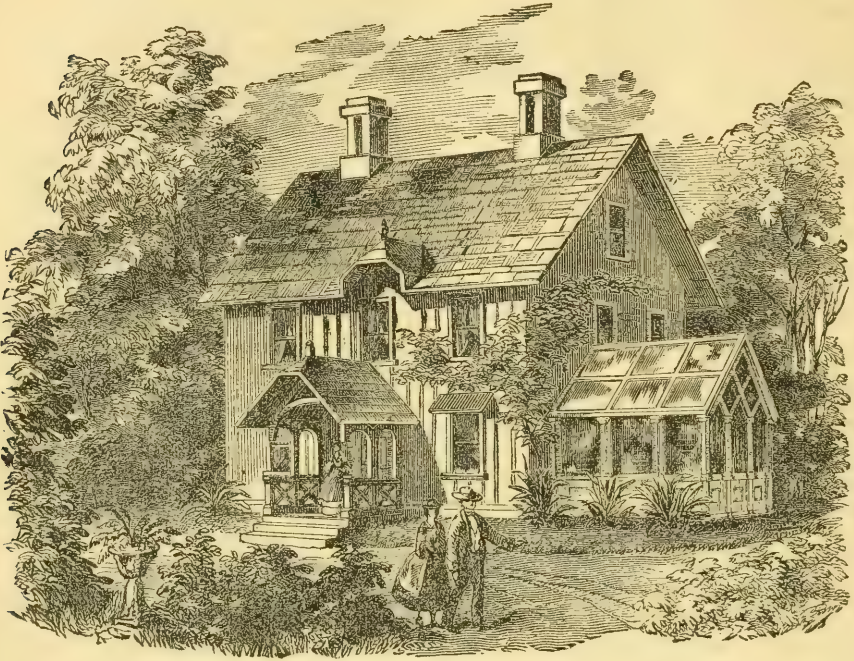
The *mowing machine* comes to such a man as a real blessing. It enables him to keep up with his younger neighbors; to cut his crops in season and secure them without loss. He is relieved, encouraged, and feels comparatively young again, because he can carry on his farm as rapidly and successfully as he did in his younger and stronger days!

Perhaps the small farmer is in feeble health—not really sick, but unable to take the lead in laborious work—but with the aid of a mowing machine and a good horse-rake, he is more than a match for the best five men in the county. But this is not all. Somehow, he feels better than he did. His appetite is sharp—he has gained flesh—stands up straighter than for many years before, and with these blessings, another has come, more valuable than all, in a *cheerful, trusting, hopeful* spirit, which brings a new sunshine and joy to his whole homestead! Wonderful! And the doctor says, "All this has come because you do not work so hard!"

There are other reasons why the small farmer should use a mowing machine, but we have pursued the subject too far to give them now. We have said enough to suggest many more reasons to those who are willing to think about it, and so we leave it at present for their own pleasant thoughts and, we trust, judicious conclusions.

QUANTITY OF FOOD FOR OXEN.—Frequent observations have shown that an ox will consume two per cent. of his weight of hay per day to maintain his condition. If put to moderate labor, an increase of this quantity to three per cent. will enable him to perform his work, and still maintain his flesh. If he is to be fatted, he requires about four and a half per cent. of his weight daily in nutritious food.—*Michigan Farmer*.

LARGE sums of money are paid away every year, by the colonial governments in Australia, to boys for the destruction of thistles. These boys, like the rat-catchers, take care not to exterminate their means of living. In order to save this expense, and effectually destroy the thistles, it is proposed to introduce the goldfinch, the brown linnet, the red-poll and the German siskin into Australia, all of which birds live on thistle seed in the season.



RURAL ARCHITECTURE.

DESIGN FOR A COUNTRY OR VILLAGE HOUSE, BY GEO. E. HARNEY, LYNN, MASS.

DESIGNED AND ENGRAVED EXPRESSLY FOR THE NEW ENGLAND FARMER.

In this design we have endeavored to provide accommodation for a small family of cultivated taste, either in the country or village. The provision of a dairy would indicate that it was designed for a Farm House, while it possesses some other features which, though not out of keeping with the uses of such a house, seem to adapt it to some prominent situation and make it something of a show house; hence we think it would be especially suitable for a small milk farm, located in the vicinity of some city or large town, to which the owner might carry his milk every morning for a market—a business from which, we are inclined to think, one might reap quite a profit, besides having the satisfaction of feeling oneself a benefactor—for rich, pure milk is a luxury that would be highly appreciated by dwellers in the city, accustomed, as a great portion of them are, to using a liquid that has been brought for miles in the cars, and encountered several processes which do anything but improve its quality.

This plan we think would be well suited to such a business as that, yet by converting the dairy into a store-room we have a convenient plan for a common suburban or country residence.

ACCOMMODATION.—From the drive-way in front three easy steps rise to the portico, A, and from this portico we enter the hall, H. This hall measures seven feet by sixteen, and contains the front stairs to the chambers. On the right is the parlor, B, a pleasant room fourteen by sixteen, and opening out of this room on the south-eastern side is a conservatory, G, for plants and flowers. It measures fourteen by eighteen feet, and is fitted up with wide shelves at the sides and a broad stand in the centre for fall plants, with a passage of three feet in width all around it.

This conservatory is designed to be heated in a manner described by Downing as the Polmaise system, namely: by means of a furnace made of a common air-tight stove placed in a brick air-chamber underneath the floor, the heat passing up through a single pipe running from the *top* of the chamber to the floor—while from the floor at the farther end of the conservatory, near the door, another pipe extends downwards, and terminates in the *bottom* of the air-chamber, thus producing a thorough circulation of air all the time, with a regulated supply of fresh air from out of doors conducted by means of a box like a common fur-

nace box, to the chamber. We have seen this method tried, and can recommend it as being the cheapest and most effective way of heating a small green-house like this.

The six upper sashes of the roof have pulleys and cords, by which means they may be lowered and raised at pleasure.

At the farther extremity of the front hall, a glazed door opens into the back entry which extends along back of the parlor and opens out upon an umbrage, I, on the eastern side of the house. This back entry contains stairs to the chambers and cellar, and opens into the parlor and the kitchen. The dining-room, C, is fourteen feet square, and communicates with the kitchen, D, by means of a small passage, fitted up with shelves. On the right of the chimney is a good-sized china closet, with drawers, and shelves for china. The kitchen is twelve by seventeen—is well lighted by three windows, and has a fire-place with an oven and boiler. Opening out of it is a pantry, E, six feet by eight, furnished with hooks, shelves, sink, pump, cupboard, &c., and opening out upon a platform

der the shelves, and of about the same width, closed by a board with hinges precisely like a trap door.

Near the ceiling, and opening outwards and upwards on the north side of the house, is a similar trap door three or four feet long and about a foot wide, which an elevating stick with notches cut into it enables an attendant to raise to any desired degree.

When the upper ventilator is opened, the heated air passes out by reason of its specific levity, and the cold air from the cellar rushes in to fill its place, in the same way that water rises in a pump when the air is withdrawn from above. A ventilated space surrounds the room, (here, of about seven inches in width, though in Mr. Wing's it is twelve or more,) and prevents the heating, so often resulting from confined air in the adjacent walls. The shelves are not flat boards, as usually constructed, but are formed of two narrow strips of board set on edge and notched into standards placed about five feet apart, by which means we get a free circulation of air on every side. The

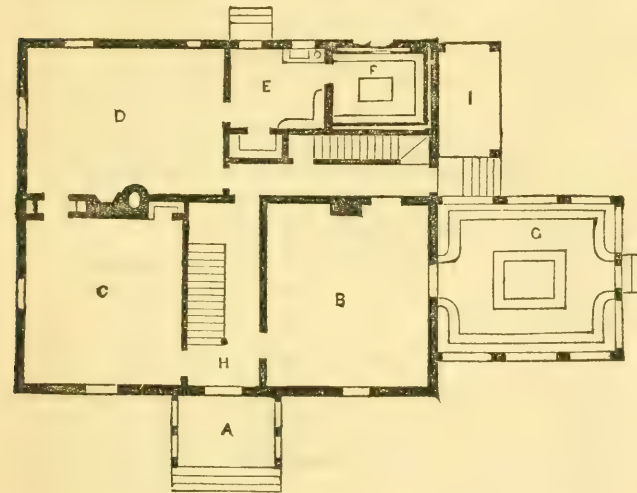
strips for shelves are nine inches apart outside, and each strip one by two inches. The shelves are eight inches apart, with six inches of clear space between them for pans. In the room on our plan there are accommodations for about eighty common pans.

The umbrage is six feet wide, and is latticed on the eastern side.

The second floor of the house contains two front chambers, each fourteen feet square; a kitchen chamber, twelve by fourteen; another chamber over the pantry and entry, nine feet square; and a small room over the dairy.

The attics are unfinished. The principal floor is ten feet high, and the second is nine and a half.

The house is designed to be built of wood, and covered in the vertical and battened manner; to be finished with white walls for papering, and a plain wood finish for all the rooms; the kitchen, pantry, dairy and back entry may be grained or stained; the rest of the house may have two coats of paint inside and outside. Cost, about \$2500.



at the rear of the house. A large closet opens out of the pantry where shown on the plan. The dairy, F, is an important feature. It is on the eastern corner of the house; the umbrage shielding it from the sun on that side, while a window on the north side admits cold air, and other provisions for ventilating keep the air continually fresh. The room is constructed on a principle invented by Mr. HARVEY WING, of Morris, N. Y., and successfully applied to his own house. It is thus described: The room is situated directly over a cold cellar, from which the air may be taken at pleasure by means of ventilators, for the perfect regulation of the temperature of the room. These ventilators consist of simple slits or openings, running nearly the entire length of the room un-

MADNESS CAUSED BY HONEY.—In Mesopotamia a peculiar kind of honey is found, which is said, if eaten in any considerable quantity, to make men mad, though only for a short time. The noxious quality of the honey is thought to be derived from the blossoms of the rhododendron, which is abundant there.

For the New England Farmer.

RIVALRY IN FARMING.

Why is it that we see no more competition and rivalry among farmers? The mechanic, manufacturer, and in short those of every profession, are always in a strife to outdo their competitors, while the farmer goes listlessly on, not seeming to care if his neighbor does raise as much again as he does on the same land, or that of better quality. If there chance to be two mechanics in the same village, pursuing the same branch of the trade, they are always on the alert to see who shall do the best work, so as to secure the most custom, which is all right and sensible. Is it not equally sensible for two farmers living side by side, to engage in such laudable competition? If there were half the zeal manifested among farmers that there is in other classes, the products of the soil would be doubled in a short time. Agricultural editors and societies are doing their best to bring out this spirit, but as yet with but little success. The manner in which premiums are offered for field crops is, in my opinion, poorly calculated to bring out much competition in their production. Most of the societies now offer a premium for the largest yield from an acre and half acre of ground, regardless of the expense in producing it. Premiums should be offered on not less than five acres of ground, and for the greatest yield at the least cost, taking the condition of the land before and after the crop is taken off, into consideration. This would give all a better chance for competition, and be productive of far greater benefits to the farming community, than as at present conducted. It would cause a greater portion of the farm to be enriched, and also cause greater quantities of grain to be raised, thereby benefiting all classes, which is the professed aim of agricultural societies. As now conducted, not more than one farmer in one thousand competes for a premium, and those who do, select some little piece of an acre, or less, and put on all the manure they have, and thus raise a great crop, costing as much again as it is worth! But they get a premium, and a great name for raising the largest crop in the County or State, as the case may be. Cannot the managers of our agricultural societies, editors of agricultural journals, or some of their readers, devise some plan by which all farmers may be induced to compete for premiums, and let the premiums be offered in a manner having reference to the permanent fertility of the soil, as well as the production of large crops. If such a scheme can be brought out, we may look for increased competition among the farmers, increased productions, and the original design of the societies will be in part accomplished. Brother farmers, let us hear your sentiments on the subject, and see if we cannot wake up the managers to the necessity of some reform in this matter. H.

Western New York, 1862.

INFLUENCE OF HOT WEATHER UPON NORTHERN AND SOUTHERN SOLDIERS.—In the medical statistics of the army from 1837 to 1854, transmitted to Hon. J. D. Bright, President of the Senate, by Jeff. Davis, Secretary of War, July 28, 1856, on pages 609 and 621, will be found a statement showing the power of endurance of a South Carolina and a New York regiment, respectively.

South Carolina 1st, 1,034 men, campaign of 1847, eighteen and a half months' service, loss by disease, 509; New York 2d, 1,063 men, seventeen and a half months' service, loss by disease, 276. From this comparison of a Northern regiment with a Southern one, in a hot country campaign, it appears that the Southern regiment lost by disease very nearly twice as many as the New York regiment in about the same length of time, and the loss from all other causes was one-third less to the Northern than to the Southern regiment.

For the New England Farmer.

LOVE AND THE ROSE.

BY EDWARD BRINLEY.

Hidden away in a wild-wood nook,
Where woodbines and blue bells were twining,
A rose, by the side of a murmuring brook,
Was gracefully o'er it inclining.

The brook sang on in its happy play,
But the rose drooped sadly above her;
Unseen she had blushed from day to day,
With no eye but the brook's to love her!

A wanderer came to that wild-wood dell
And the rose looked up with gladness;
But the limpid brook knew 'twas Love too well,
And she rippled along in sadness.

The god sprang up to the rose's look,
Down deep in her lap he hurried;
She turned in disdain from her faithful brook,
Whilst Love in her bosom was buried!

Hidden away in her fragrant folds,
On his rose couch Love reposes;
But short is the spell that the lone flower holds,
Love leaves her—for other roses!

Deep—deep in that wild-wood's nook,
The neglected rose is pining;
Still the murmurs of Love gurgles on in that brook,
Where the woodbine and blue bells are twining!

Oak Hill, 1862.

THE POWER OF STYLE.

Human language may be polite and powerless in itself, uplifted with difficulty into the expression of the high thoughts it utters, or it may in itself become so saturated with warm life and delicious association that every sentence shall palpitate and thrill with the mere fascination of the syllables. The statue is not more surely included in the block of marble than is all conceivable splendor of utterance in Worcester's Unabridged. And as Ruskin says of painting that it is in the perfection and precision of the instantaneous line that the claim to immortality is made, so it is easy to see that a phrase may outweigh a library. Keats heads the catalogue of things real with "sun, moon, and passages of Shakspeare;" and Keats himself has left behind him winged wonders of expression that are not surpassed by Shakspeare, or by any one else who ever dared touch the English tongue. There may be phrases which shall be palaces to dwell in, treasure-houses to explore; a single word may be a window from which one may perceive all the kingdoms of the world and the glory of them. Oftentimes a word shall speak what accumulated volumes have labored in vain to utter; there may be years of crowded passion in a word, and half a life in a sentence.—*T. W. Higginson.*

For the New England Farmer.

LETTER FROM THE HOMESTEAD.

Chester, N. H., June 5, 1862.

MY DEAR MR. BROWN:—Coming in the train from Manchester, this morning, I stepped off at Derry, about six miles from “home,” thinking a draft of my native air, another from the iron-bound bucket that hangs in the well, a glimpse of my beautiful trees planted in the days of my youth, and a day with my kindred, who still remain, might be pleasant and good for soul and body. I fancied that it would be very easy to walk across, but difficulties, unforeseen, beset me at every step. You need not pause to moralize over the decay of my strength, or my premature old age, for the obstacles were not in that direction. People in the country do not walk so much as in the city, and the reasons are, that every one in the country has a horse, and that, much of the year, the roads are snowy, or muddy. A walk of six miles about the city, is no great exertion even for young ladies, but in the country, we never thought of getting over so much space on foot. It was difficult to convince the men about the station, that I was really going to walk to Chester, when I requested to have my valise sent over by the stage. Finally, I got off, and called at the Bank, about twenty rods on my proposed journey, where my good friend, the Cashier, insisted on sending me over with his horse. I declined his civility, with the explanation that I really wanted to walk over the road I had so often travelled when a school-boy at the Derry Academy. Once more I set forward, like the pilgrim in the Progress, and had gone about a quarter of a mile, when a stranger gentleman in a handsome chaise overtook me, and evidently esteeming riding far above walking, saluted me with, “Are you going to the village, Sir?” and made room for me, as if it were matter of course that no sane man would walk, when he might as well ride. I really preferred to walk, but as I had just come out of Court, and did not want to argue, or discuss the question, nor yet to decline without a reason, I stepped in and rode nearly a mile, as the easiest way of disposing of the matter. Once more I was on foot, reflecting for the moment upon the difference between the habits of city and country. I might walk a hundred miles about Boston, and nobody offer me a ride, but here every man insists on doing me a kindness.

Give me country life, thought I, where people know, and care for each other. The first man I met after leaving the chaise, was a gentleman whom I had known when I was a boy, though he was not. He greeted me very warmly, and gave me a little specimen of the frankness of rural manners, by remarking, “Your hair begins to show that you are not so young as you once were.” This

was gospel truth, to be sure, and as he had introduced the subject, and I recognized on his head the same wig which was there thirty years ago, I could not forbear to reply, that I did not see the least change in his hair, since I first knew him! Whereupon, with a hearty laugh, we said good-by.

The country was in its full glory. The sky was just clearing away, after a gentle, steady, summer rain, all night long, and every bird, and leaf, and blade of grass, was thankful. There is a great deal to see in such a morning. There are the birds. I knew every one of them. They have not changed a feather since I first knew them. When I was a boy I skinned and stuffed specimens of all that could be found, and they are now here at the homestead, a hundred of them, as perfect as when first mounted. I suppose birds do not improve much. Those that came out of the ark probably made just as good nests, and wore just as fine feathers, and sang just as good songs, as these about us. Agassiz says, that an examination of the coral reefs of Florida shows that they have been in process of formation *seventy thousand years*, at least, and that there has been, in all that period, absolutely no change in the different species of coral insects. A class of writers like the author of “The Vestiges of Creation,” insist that species progress from one into another, so that, bye-and-by, gorillas may become Christian men, just as tadpoles become frogs, or worms become butterflies. These latter, however, are not changes of species, from generation to generation, but only the perfection of the species in its own life.

The thrush and catbird sang this morning the same songs, I have no doubt, that they sang in Paradise, and though you might possibly teach one to whistle Yankee Doodle, her descendants would not inherit the gift. One advantage which observers of nature possess over mere lovers of mankind is, that the world never grows old to them. They have the same stars by night, wheeling in their constellations grandly over the firmament; the same hills, and valleys, and birds, and trees, and flowers by their wayside, all their life long; while they who depend on society, see young faces become old, or new faces take the places of those that have vanished from sight. But we must pass on, for there is a great deal to see in six miles in the country in the first week in June.

A WORD ABOUT LAWNS.

In front of the farm-houses, where there are no fences, and where cattle and horses daily crop the grass, we see thick green turf, really better lawns than any kept under the scythe. Indeed, there is great difficulty in this hot, dry, unequal climate, in keeping a lawn green and close through the hot season. I tried to see what this roadside turf is made of, as I walked along. It seems to be

chiefly red top or white top and white clover. Herdsgrass is short-lived, a biennial properly, and its bulbous root is destroyed by close cropping. Two things are essential to a good lawn,—keeping it close, and frequent rolling; not merely frequent mowing, but preventing the grass ever maturing into stalks. Nature will do *something*, and has a great propensity to perfect her works regularly, first the leaf, then the flower, then the fruit, then death forever, or for the season. Grasses follow this law, and if once allowed to go beyond the leaf, are reluctant to go back to leaf-making again. We see the same thing in fruit trees, which usually make little wood while full of fruit, but which are readily diverted from their tendency to bear fruit, into producing wood and foliage, by taking off their blossoms. By *keeping* the grass short, as is done by constant feeding by animals, the process of leaf-making is constantly repeated, and then constant treading at the same time keeps the soil compact and uniform, which seems to be favorable to a thick, but not to a rank growth.

MENDING ROADS.

This is the season for “working out the taxes” on the roads, and I, of course, stopped and exchanged civilities with my old acquaintances engaged in this pursuit. I have no criticisms to make on what they were doing, but in general, it may be said, there are two or three principles that need to be understood, on this subject. One of these relates to the cure of wet places, whether springy hill-sides or swamps. Those places are miry and soft, not because of surface water, but because of water below. The remedy is by drawing the water out. A single three-inch tile drain, or a stone drain, laid four feet deep along the upper side of the road, if it be across a hill-side, would, in many cases, at the cost of one dollar a rod, do more to harden the path than ten times as much spent in hauling gravel, and in labor. The water should be cut off before it reaches the road, if possible; if not, a drain each side, three or four feet deep, will draw away all the water from the centre, without disturbing the road-bed, while piling sand and gravel on to soft mud only deepens it. It is merely an application to the symptoms, while drainage removes the disease itself.

BALDWIN APPLES.

Chester is one of the best fruit towns in the State, and the Baldwin apple has been a favorite fruit here. There is an impression, as I gather from the papers, and from private sources, that the Baldwin has become more tender or the climate more cruel, so that the two are not now so well adapted to each other as formerly. I found several first rate fruit men at work on the road, and put the question to them, as I have to other intel-

ligent men here, as to whether the Baldwin is less reliable than formerly. I think the fair conclusion is this, that the old orchards of fifty years' growth and more, are dying off by natural decay, and that the old natural trees which were grafted a dozen or twenty years ago, as most all of them were with the Baldwin, are failing through old age and overbearing. Again, about 1855, many young trees were winter-killed in all parts of New England, and the Baldwin, which is doubtless more tender than most varieties, suffered very much, and as it had been long a favorite, and was largely planted, its loss was generally observed.

I think, however, that the young orchards of Baldwins, which escaped that severe winter, and those since planted are here perfectly healthy, and if I were now to plant an orchard in Chester, or the vicinity, on high and hard land, I should, for market purposes, plant one-half of it, at least, with the Baldwin. The granite hills and the clear air of old Chester are wonderfully favorable to the growth of fruit trees; and by the way, I have to-day been reminded that it is not unfavorable to the growth of enterprising and strong-hearted men, which leads me to say

SOMETHING ABOUT THE WAR.

As I rested a moment at the post-office, the Manchester stage arrived, and upon it one of the soldiers of the 2d N. H. Regiment, Joseph Morse, who was taken prisoner at Bull Run, now on his return from North Carolina, where he with hundreds of others was paroled. He had been in the prisons of Richmond and Salisbury about a year. We had but a moment's conversation, as he had not yet seen his family. To the inquiry how he had been treated, he replied, “You can judge something of it, when I tell you that four men were shot in the prison where I was, for looking out at the window.” He looked in good condition, although he said he had suffered from various diseases. I met also at the post-office Mr. Brown, of Chester, who has five sons now in the army. I asked him if he had any son at home. He said yes, he had six more at home, and two of them wanted to enlist. Chester has a population of only about thirteen hundred, and has sent fifty soldiers to the war, one of whom was killed at Williamsburgh.

You perceive that my six-mile journey was by no means barren of incident or interest. Indeed, I have hardly begun to tell you about it. The garden seeds which I planted on the 20th of May, are well up. The frost that followed on the Saturday after, did not venture on to the hill, and the tomato plants which I brought from Boston are safe and flourishing, and on the whole, I am having quite too good a time not to share it with you and our readers.

H. F. F.

For the New England Farmer.

FARMERS' HYMN.

BY R. F. FULLER.

When a week of toil is o'er,
Welcome is the day of rest !
In these courts we come, once more,
By devotion to be blest !
Kindle, Lord, our Christian fires ;
And draw upward our desires !

With us, when we hence depart,
And our weekly toil renew,
May Thy presence, in the heart,
Still abide in all we do !
And, whate'er our labor be,
We will work as unto Thee !

Farmer's toil may symbolize,
And the spirit lessons teach.
If we labor to be wise
And the sense of symbols reach,
Nature's volume shall impart
Still instruction to the heart !

In the season of the year,
While to sow the seed we haste,
Life has such a seed-time here,
We remember, not to waste :
Still reminded, as we sow,
We will harvest, weal or woe.

When the tender corn we weed,
With the soft earth freshly stirred,
'T will remind us to give heed,
Lest a sin should choke the Word.
While the cherished corn we hoe,
In our hearts the Truth shall grow !

As the stalks rejoicing rise,
In a glad and green increase,
We will watch, with anxious eyes,
For the growth within, of peace—
Has the gentle herb of grace
With the corn kept even pace ?

When, in sparkling morning hours,
Dews, like incense, soar again,
And, when soft refreshing showers
Fall, in blessings of the rain,
Father ! we will pray Thee, thus
Pour Thy spirit down on us !

When we cure the crop of hay ;
And the herb we cut, at morn,
Withers ere the noon, away—
So the life of man is shorn !
Swaths we mow shall moralize,
As the tree falls, so it lies !

When our harvests all are o'er,
And the end of summer comes,
Doubly precious is the store,
Treasured in our harvest homes :
Garners of the soul were filled,
While the busy farm we tilled !

SULPHURIC ACID.

"A. R." asks us if sulphuric acid, when applied by itself, has any value as manure ? We answer, Yes ; for although its value may be materially increased by availing of its chemical action on other substances, still, used alone, it has high value. It should always be applied, however, in an extremely dilute state, certainly never at a greater strength than one part of acid to 1000 of water. There are very few plants which do not contain sulphuric acid, or its salts, in some form, and when

applied to the soil there are few of those bases with which it combines advantageously, which do not exist in the soil to a greater or less extent.

Sulphuric acid when applied dilute to compost heaps, prevents the escape of ammonia without interfering with its solubility ; all free alkalis are changed into sulphates, and with the exception of lime, are still left soluble in water ; many of the primaries are more acceptable to plants as sulphates than in their simple condition, while a large number of the proximates have increased value being acted on by dilute sulphuric acid.—*Working Farmer.*

ONE CAUSE OF DROUGHTS AND FRESHETS.

It is plain to every observer, that our country is now more subject to droughts than it was twenty or thirty years ago. Within the last five years, we have suffered in this respect seriously. The loss to the farming community, and through it to the whole population, has been many millions of dollars. If they continue for several years more, in frequent succession, there is reason to fear that the "hard times" will pass away very slowly. Is there any natural cause for droughts, or are they sent upon us solely as special visitations of Providence for our national sins ? We would not speak lightly of such visitations, but we are inclined to think that our sufferings in this particular may be traced chiefly to our own bad management. The wide destruction of our forests doubtless has something to do with the production of droughts, and of these destructive floods or "freshets" which are becoming alarmingly frequent.

If the country is widely denuded of its trees, the land is more exposed to the burning rays of the sun, and to the winds which cause a very rapid evaporation. Then, too, forest trees are so many pumps to suck up moisture from the depths of the earth, and to diffuse it through their leaves into all the surrounding atmosphere. From thence it falls upon the surface of the ground. Perhaps some of our readers have amused themselves with making estimates of the amount of water evaporated from the leaves of a single tree, and then of a large forest, in a single day. To one who has never thought about it, the subject is one of great interest. All readers of history know that many of the rivers and streams of the Old World, which once were wide and deep, have now shrunk into much smaller dimensions ; from what cause, can any one tell, if not that the hills and mountains are now almost entirely bereft of trees ? Droughts prevail all over the Eastern continent, with increasing severity ; and scientific and observing men everywhere proclaim that this is owing chiefly to the cause of which we now speak.

Valleys and low-lands, and fertile plains, should of course be cleared of trees, and devoted to farms and gardens ; but at least the rocky hills and mountains should not be shorn of their leafy honors. Let the trees stand sacred from the desolating ax, all along our heights, to break the fury of storms, and to condense and bring down the useful vapors of the clouds upon our fields, and into our springs and streams. It is high time that the older States of the Union began to move in this matter, either regulating the destruction of our old forests, or encouraging the growth of new. We believe that some wholesome laws touching this

matter, would both secure our posterity a good supply of lumber, and a good degree of exception from droughts.

All that individuals can do in this matter, is to preserve their own forest land in just proportion, and by underdraining, thus deepening the soil and giving it a porous, spongy character, render the land capable of absorbing and retaining as large a quantity as possible of the water that falls upon it, instead of allowing a large portion to flow off, as is now generally the case. Our State Legislatures, might, we think, with great propriety remit the taxes for 20 years on all land devoted to high forest, (not low woods for charcoal and hoop poles,) and tax land which might, but does not carry a good growth of high or low woods, at the rate its value would warrant if properly improved.—FORRESTER, in *American Agriculturist*.

FRUIT HINTS.

I have met with decided success in using tobacco stems as a preventive for the peach borer. Frequent examinations since early last spring have revealed but one borer. I renew the supply of stems as often as I deem advisable, and find no injury to the roots from them. I have also acted on Miss Morrill's hint relative to the application of saltpetre, alum, or salt, as special manures for the peach, and with promising results. I sprinkle them on the soil to within about a foot of the trunk of the tree.

My trees, which were inclined to be sickly and of puny growth, are now in splendid condition, and this season made very strong, healthy growth, and from summer pruning are sending out strong, thick branches, some sweeping nearly to the ground, offering complete protection to the trunk from the scorching sun.

Last season, I used Gisburst's compound for slugs on my pear and cherry trees. This season I have used nothing but whale oil soap, which I find quite as effectual and more beneficial to my trees, as it gives a healthy, bright color to the bark, and keeps the leaves fresh-looking and free from spots. I apply it once a week or fortnight, as they may require, and the expense is but little more than that of common soap, costing here five to six and a quarter cents a pound. Instead of a syringe, I use a "hydropult," which has great forcing power, and its flexible tube renders it far superior to the syringe in application to the under side of foliage.—H. C. VAN TYNE, in *Horticulturist*.

ABOUT PINS.

The manufacture of pins, in this country, was first undertaken soon after the war of 1812; when in consequence of the interruption to commerce, the value of a paper of pins was not less than one dollar, and those were of a very inferior quality to those now only worth six cents a paper. By the old method of manufacture the number of distinct processes was fourteen. Now they are manufactured in Connecticut by a self-acting machine, which completes them by one process and sticks them into the papers also! The only attention the sticking machine requires is to supply it with pins and paper. At the present time the total weight of pins made in the United States, is sup-

posed to be from seven to ten tons a week. What indeed becomes of all the pins! When we reflect that, up to the middle of the XIV. century, English ladies were obliged to make use of clumsy wooden skewers, we can appreciate the abundance and cheapness of these useful little articles. Yet nothing is new under the sun, and pins are found in Egyptian tombs, of much more costly and elaborate make than those now used. Some of these are eight inches long and are furnished with large gold heads. The ladies' "pin-money," in those days, must have been quite an item in the domestic expenses.

EXTRACTS AND REPLIES.

HARD COAL DUST.

Can you inform me what this coal dust is good for? It collects in the flues of our chimneys. Can it be made use of in any way for manure, or will it be of any use to spread as a top-dressing? Hundreds of bushels can be had at very little cost for saving and trucking. I send you a sample just as it comes from the flue and about the chimneys.

AN OLD SUBSCRIBER.

Biddeford, Me., 1862.

REMARKS.—The dust enclosed seems to be colorless and tasteless, but notwithstanding this, it may have a valuable effect upon plants. Apply it as a top-dressing to small patches of grass land, and about plants that are hoed, leaving some of the same kind of plants, ten or fifteen feet distant, without it, and note the effect. We think it cannot be entirely without value.

CLAY FOR DRAIN TILE

There is in this town a clay bed suitable for making the finest quality of bricks. I wish to inquire if it is also suitable for making drain tile; that is, will the same quality of clay make either brick or tile? Can you also tell me where I can obtain machines for the manufacture of tile, and the probable cost?

A READER.

Snow's Store, Vt., 1862.

REMARKS.—Clay that is suitable for brick, we are informed, is just what is wanted for making drain tile. We cannot inform you where tile machines are manufactured. Their cost is from one to two hundred dollars.

LICE ON CATTLE.

In answer to the inquiry of "Yeoman," Laconia, N. H., I will say that a safe, sure, simple and economical way of killing lice on cattle is to take the water in which potatoes have been boiled, rub thoroughly the cattle which are afflicted in this way once a week, for two or three weeks, or until the nits are all hatched out, and the stock of lice will be among the things that were. The remedy is so simple that some will not believe until they have tried it. It is, nevertheless, a sure cure, if faithfully and thoroughly applied.

Another remedy is in an ounce of preventive,—good feed, good water, good clean sheds and stables, and lice will not colonize in the vicinity.

Highland Lodge, Vt., May, 1862.

H. F.

MUCK AND ASHES.

I see in last week's *Farmer* Mr. JOHN DAY, of Boxford, is made to say that he would rather have a cord of muck, well composted with from four to six bushels of good wood ashes than the same quantity of stable manure.

Now, is this really so, or is it an assertion made at random, without careful and repeated trial, which should characterize our experiments before given and recommended to the public? If Mr. Day has a good foundation for his statement, (and I certainly have no good reason to gainsay it,) one, at least, of the readers of the *Farmer* would like to be assured of it. How composted, and how long must it lay before fit for using?

WM. J. PETTEE.

Salisbury, Ct., June 6, 1862.

REMARKS.—Mr. DAY will please answer for himself. The muck and ashes would certainly have great value, but whether to such an extent as he states can only be determined by careful experiment.

PRICES OF WOOL.

You have intimated in your paper, and I have seen the same in the *Vermont Chronicle*, that wool is higher than it has been for forty-four years. I have raised wool about forty years, but within a much less time I have sold mine for sixty cents per pound, and some of my neighbors at sixty-seven. Please inform us where we can sell for the same prices now.

JULIUS HAZEN.

Hartford, Vt., May 27, 1862.

REMARKS.—Our intimations of the prices of wool are gathered from the market reports and from information forwarded by wool-growers. We wish we could inform friend HAZEN where to get sixty-seven cents per pound for his wool now.

COE'S SUPERPHOSPHATE.

Will you inform me what quantity of Coe's superphosphate of lime will be sufficient as a top-dressing, per acre, for grass land that is now in pretty good order? What is the price per hundred? Do you think it a cheap manure?

JAMES S. HAMMOND.

Liverpool, N. S., May, 1862.

REMARKS.—Coe's superphosphate is an excellent fertilizer, we have no doubt, and we think may be profitably used in many cases. From two to five hundred pounds per acre are used on grass land, spread evenly on the surface, at any time. It costs \$45 per ton, or a little more than two cents a pound.

RAISING TURKEYS.

Will you, or some of your writers, inform me through your valuable paper the best way to raise young turkeys, and what is best to feed them on when young?

G. H. W.

Ripton, Vt., 1862.

Every day has its appropriate duties, attend to them in succession.

For the New England Farmer.

LESSONS FROM MY WINDOW.

My pillowed chair is drawn up by the open window, for May is here, and south winds and bird-songs woo one away from the darkened stillness of the sick-room. The fruit trees are white with flowers, and waves of fragrance are drifting in at the casement. Tulips in grandeur, and pansies in humility, are opening in the garden borders, while the seeds which winter buried, are bursting the moist earth in resurrection. Two golden orioles are picking the boughs of the fir tree, flashing in and out of the dark foliage like sunbeams; and a chorus of music comes from the top of the old elms.

It would not seem so very strange to me if residents of the city should have few thoughts of the one great Creator; where nearly every object which the eye rests upon bears the impress of art; where the smoothly-shaven parks, and the trees which fain would throw their broad arms in freedom, are trimmed into "graceful symmetry," all bear, in legible characters, the edict of man, "thus far shall thou go."

A real, genuine Christian should be, and will be, a Christian everywhere, no matter what his surroundings are. Yet it seems to me that country Christians are very blameworthy, if they have not a deeper experience of the love of God, and consequently a more overflowing love of humanity, than is possible for one who is confined to brick walls and pavements, with only a fragment of blue sky overhead. Why is this world so beautiful? The grass probably would be as acceptable provender to cattle if it were of some dull hue instead of this soft, refreshing green. Trees might bear fruit without their profusion of delicate bloom. The sun might rise and go down, without baptizing the pearly clouds with all-hued glory, and yet guide the planets on, and scatter light and heat. Why is this wondrous beauty, if not to tell us that a loving Father planned it all, a Father who knows how the hearts of His children would grow sick and faint on their earthly journey, if every step did not give evidence of His watchful presence?

We have that Presence. Then look up, tired hearts, and rejoice. For He who "hath made everything beautiful in his time" is "*Our Father, Our God*."

REMARKS.—And the most beautiful of all, is the loving, gushing heart, that gives expression to genuine Christian sentiments like the above.

THE BEST TIME TO PRUNE.

An old clergyman is quoted as defining this time to be "when your knife is sharp." He was certainly half right, for a smooth, clean cut is very essential to the healing of the wound. But there is very great difference in the healing of wounds on account of the season in which they are made. Pruning done in March and April, especially if large limbs are removed, often injures an orchard for life. The sap oozes from all the pores and runs down the bark, discoloring it and oftentimes destroying it—called scalding. Without other protection, decay begins, and in a few years you have a hollow limb.

We like the month of June for pruning better than all others. If the work is done soon after the new wood begins to form, the wounds made by the removal of small limbs will be nearly covered over the same season they are made. The leaves make such a demand upon the wood for sap that none of it escapes from the wounded pores. It is also a favorable time for thumb-pruning. By watching the growth of the shoots upon young trees they may be brought into symmetrical shape without much use of the knife.—*American Agriculturist.*

THE MILLENNIUM COMING.

By referring to Webster, Noah, not Daniel, we find that the word "millennium" signifies a thousand years, or a *period of happiness*! An impression is upon our mind—probably gained by the early reading of an ancient book—that this period of happiness is to be preceded by great revulsions among men—by wars and rumors of wars—by famine and pestilence, and untold horror and suffering occasioned by the unbridled ambition of wicked men, and the atrocities of their deluded followers.

The latter part of these predictions is now certainly fulfilled to the letter. The war is upon us in gigantic proportions,—a cruel and wicked one, waged by those who had always enjoyed Heaven's choicest blessings,—a causeless, unnecessary war, and intended to destroy the best government that ever blessed mankind. On the heels of this will follow those dire calamities always consequent upon war,—the destruction of public property, the devastation of private homes and scattering of families,—the debasing influence of camp life, the breaking up of the usual channels of business, and the want of that commercial confidence which must exist among business men in order to secure national prosperity. These evils will stalk like spectres through all the southern land, where old men will lie down and die for want of bread, and the wails of starving women and children will fill the air, as with hollow eye and sunken cheek they seek a scanty subsistence from devastated fields and the smouldering ruins of grain stacks set on fire by their infatuated hate.

But we must not lose sight of the *Millennium*. Although thick-gathering horrors rest upon our deluded brethren of the South, plenty and prosperity dwell with us, in all the substantial wants of life. The hum of industry is everywhere heard, our granaries are abundantly supplied, labor is everywhere rewarded, and every heart and hand is full of devotion to the cause of liberty, and the special care of our sons, now in the field.

In the midst of our New England towns there is one that is a *MODEL REPUBLIC*—a forerunner of the blessed Millennium! During the Indian, French and Revolutionary wars, though with a

population not exceeding five hundred souls, it sent *one hundred and four* soldiers into the field! It has now a population of about ten or twelve hundred souls, who have real estate to the amount of a quarter of a million of dollars, and have a million at interest! Their taxes are about forty cents on a hundred dollars. They also own a fine town farm, which, for a long time, had but one inmate, a poor soldier of the war of 1812. The *poorest man* in town kills a good beef and a hog annually for the use of his family, and keeps one or two good cows! There is not a *lawyer* or *doctor* or *sheriff* in the town! They have never dismissed a minister from the pulpit, and the people have not had a case on the docket of their county Court for more than ten years! It is said that no widow of this town ever had her "thirds" set off, and that wills are almost always settled by the parties interested. There are eleven schools in the town, usually taught by young women, and it has always been the practice to send the boys to college, who are "*quick to learn*."

The soil of this little republic is high, moist and warm, not frosty, and during extreme cold weather, the thermometer does not fall so low, by ten degrees, as in some other towns within ten miles of it. The people are nearly all farmers, and are remarkably healthy. Some of its citizens have lived to be more than one hundred years of age, many over ninety, and the "most of them have lived to be from seventy-seven to eighty-five!" Truly, they have found the "elixir of life." Major S. says he has seen three-fourths of the world, but never found a soil so good, or a people so healthy. No liquor is sold in the town, except as a medicine. An agent was appointed at a salary of \$40, and the first year his returns showed sales to the amount of ten dollars! At a central point, stand two splendid liberty poles, throwing the glorious stars and stripes to the breeze. It was on this very spot "where the boys rendezvoused and were inspected, and with their fowling-pieces marched to join Gen. STARK, at Bennington, during the Revolutionary war. They had no music to cheer the parting from the loved ones they were leaving behind, and must have gone in silence and sadness, had not an old gentleman by the name of ROACH—honored be his memory—placed himself in front, and set up such a *whistle* as electrified the whole party, and put new mettle into their heels as well as their hearts!

Many other virtues and graces abound in this delectable town—this little Utopia, where the millennium is dawning. The men, of course, are excellent husbands, and the women exemplary wives. The daughters are from a healthy race, and are fair to behold, vigorous, and not "bad to take," when they can be caught. The young men—except the scholars—stick to the farms, take, and

promptly pay for the newspapers they read, keep posted up in the affairs of the world, and are brave, hardy and intelligent—true descendants of the old stock of '76. Eureka! What a blessed place is DUNBARTON, Merrimack County, in the State of New Hampshire! But Dunbarton cannot supply the demand for girls for all New England, and young men who are "seeking a settlement for life," must govern themselves accordingly.

Whatever of romance may be found in this article, may be charged to our old friend, DAVID TENNY, Esq., of Dunbarton, who thinks that if that spot is not Paradise itself, he who resides there will find himself on the direct road to that desirable place.

For the New England Farmer.

SEASON IN VERMONT---SHEEP AND LAMBS.

MR. EDITOR:—It is now the 27th day of May. The weather is fine. Grass looks well, as does early sowed grain; the season has been short for farmers to get in their crops, yet they have not been idle since Mother Earth has been stripped of her white covering which has so long concealed her from view. The farmers have got in large crops, generally; though there are many that have gone to fight for their country, yet those that are left at home with their shovels and hoes, seem to think that they can do as much for their country by cultivating the land, as their brothers who have gone to the field of battle. The trees are all leaved out, and the plum trees are in full bloom; the past winter has been very favorable for fruit trees, as there was no thaw to start the sap, nor sudden freezes, which I think have done more to shorten the lives of the apple trees than anything else. Where were once raised 600 and 1000 bushels of apples, are now raised only 12, 20 and 30 bushels, and in some places not any; there is not an orchard within my knowledge, where there is not more or less of the trees dead, and it will not be long before the farmers of Vermont will depend, in a great measure, on other States for their fruit, while they have as good soil for fruit raising as any other State. The trouble is, they do not take good care of their fruit trees; they have heretofore raised their own fruit, but they think it won't pay to trim up the old orchard, in which more than half the trees are dead.

The ground is quite dry, as there has been very little rain since the farmers commenced work on land. It has been a very good time for lambs this spring. There are quite a number of sheep in Northern Vermont; a great many of them are the Merinos, which produce an excellent quality of wool, but are not large enough for mutton, and there is a manifest degeneracy in them. They require more care and better food than the common breed, and also require a temperate climate.

What breed of sheep is best for a farmer to keep for wool and mutton? The sheep-growers are apt to let their flocks degenerate in consequence of the bad selection of males and injudicious crossing; these points require unremitting attention, for it has been proved by experience that

even the best breeds lose a portion of their good qualities, if the necessary crossing is not seasonably undertaken. The separation of the flocks into sections, or families, should be strictly observed; the product of each animal should be carefully weighed, and registered from generation to generation, and as soon as it is perceived that a fleece is diminishing in weight, or deteriorating in quality, a change in the male animal should be made immediately.

H. W. J.

Orleans County, Vt., 1862.

For the New England Farmer.

"TWIN LAMBS."

MR. EDITOR:—Many of our farmers are of opinion that the rearing of two lambs, yearly, from one sheep, is more remunerative than the rearing of one. I think this opinion is erroneous, as any one who will take the trouble to investigate the subject must readily see. I believe every one will admit that it is more profitable to keep good stock than it is to keep poor, and we certainly cannot produce as good when one animal is suffered to rear two, as we could if it only reared one.

For instance, to illustrate the matter, we will suppose that 100 sheep, of the value of \$300, produce 100 lambs. Ten per cent. of those lambs will probably die, leaving 90 to be reared. 90 lambs, at one year old, after being sheared, will be worth \$3 per head. They will shear about 4½ pounds of wool per head, or 405 pounds.

On the other hand, if every sheep produces two lambs, from 100 sheep we shall have 200 lambs. Of course, these will not be as large and strong as the others, consequently, a larger proportion will die, undoubtedly twenty per cent. at least, leaving 160 to be reared. These, at one year old, being smaller and less thrifty than the others, will not be worth over \$2 per head. For the same season they will not shear over 3 pounds of wool each, or 1½ pounds per head less than the first, amounting to 480 pounds. The wear and tear on the invested capital or original stock of \$300 in the latter case must be at least fifteen per cent. greater than in the former, amounting to \$45. The cost of keeping the surplus lambs, 70 in number, one year, would be at least \$60. The result, as near as I can estimate it, will be as follows:

90 lambs, 1 year old, \$3 per head.....	\$270
405 pounds of wool, at 40 cents per pound.....	162
Whole amount.....	\$432

On the other hand,—

160 lambs, 1 year old, at \$2 per head.....	\$320
480 pounds of wool, at 40 cents per pound.....	192
Gross proceeds.....	\$512
Deduct for extra wear and tear on capital.....	45
" " keeping 70 surplus lambs.....	60
Net proceeds.....	\$407

Leaving a balance of \$23 in favor of the 90 lambs. I believe, Mr. Editor, that this is a fair and candid estimate. If any of the advocates for rearing twin lambs can show a different result, I, as well as many others interested, would like to hear from them.

A CONSTANT READER.

Salem, N. Y., May 28, 1862.

For the New England Farmer.

THE STUDY OF NATURAL HISTORY.

The importance of a knowledge of natural history to the agriculturist has become appreciated to a certain extent, but not, unfortunately, to nearly its true value. That the agriculturist can be successful only when he knows the capabilities of Nature, her provisions and her laws, is plainly apparent, for in no calling can success be calculated on, unless after a deliberate and careful examination and comparison of the assistances which may be rendered to overcome obstacles which exist, determining their relative and individual strength, the one to balance or overcome the resistance of the other.

For instance, the merchant has to overcome difficulties caused by competition in the demand for goods, of which there is an uncertain supply, by fashion, by the uncertainties of existing national relations, which cause fluctuations in the money market, and more or less disturb, and sometimes embarrass his operations, or cause them to result disastrously. To overcome these, the merchant carefully acquaints himself with the condition of markets and the prices of those goods, which, to him, are specialties; he calculates the chances of a great or small supply, caused by a great or small production; attentively watches the fluctuations of the money market, and the various political questions and changes which may arise, and analyzes them, to discover the value they may hereafter possess to his operations. Observing these things, and knowing the balance to be favorable, with an allowance for contingencies that may arise, he is generally enabled to conduct his business with fair, or even great chances of success.

The obstacles the farmer has to overcome are numerous, but they are all presented by Nature, and the remedies she affords are sufficient to keep the balance perfect, if they are permitted to act vigorously, and in their proper places. It is important, therefore, that he should be acquainted with, and not injudiciously interfere with the beautiful laws by which she regulates the phenomena which are operating for, or against him, but avail himself of those that are acting for his benefit, and even stimulate them to still greater exertions. There is often, among farmers, a contempt for scientific men, or those who make a study of Nature, but such do not reflect that no one is so much a naturalist as they; that every operation on the farm is but an experiment in one of the branches of natural history; its success but another scientific triumph, its failure usually the result of ignorance of some great law; very seldom caused by unforeseen or uncontrollable accident.

The means employed to maintain the equilibrium, in animate and inanimate Nature, are, of course, different, but that they are adequate to check the preponderance of any element, or its disproportionate increase at the expense of others, is plainly manifest. In inanimate Nature, the effects of different elements are modified, or counteracted, by others to a degree, or entirely opposite in Nature. For instance, the effects of light, although absolutely necessary to a healthy condition of animal and vegetable life, require modification, for the reason that constant exertion necessarily attendant on the presence of light, would be highly injurious in consequence of the exhaustion

which would follow; therefore, the absence of light (darkness) is absolutely necessary at intervals to secure the rest demanded by the system which has expended a portion of its vital power while in activity. Carbonic acid gas, although absolutely necessary to vegetable life, unless counteracted by the presence of oxygen, is fatally injurious to animal life, but Nature has wisely provided that animal life shall reject carbon, thereby furnishing food for the vegetable, which, in its turn, rejects oxygen for the support of animal life.

In animate Nature, different tribes are employed to destroy others which are injurious and often prolific. That the destroyers may not increase disproportionately to the others, they are less prolific in proportion to their strength and rapacity; for instance, many families in the Herbivora (vegetable devourers,) are injurious to the farmer in consequence of their depredations on his crops. They are generally very prolific, and their rapidly-increasing numbers, depending on vegetable life for food, would, unless some check were provided, completely exhaust the supply of food which is necessary to their existence; but Nature has created other animals which prey on them, and keep them reduced within a necessary limit.

Myriads of insects are created, and their numbers, like the locusts of Egypt, or the army worms of our own day, would overrun and devastate the land, were not some check provided: but in their own class are tribes created which prey upon them, and of mammals and birds whose orders subsist upon them.

How important it is, therefore, that the farmer should know and protect those elements that are assisting him: how necessary it is that he should carefully investigate the phenomena of Nature, and appreciate the value of even its minutest help. Let him, therefore, observe and study; let him encourage the spirit of inquiry that he may see dawning in the minds of his children, and teach them to distinguish and protect the vilest worm, if its life is spent in assisting him. If it is true "that he who has made two blades of grass grow where but one grew before, is a public benefactor," how valuable must be whose life's work has enabled him to say that fertile and flourishing acres had come where nought but a desert and wilderness was before.

EDWARD A. SAMUELS.

FERTILITY OF WHEAT.—A Mr. A. W. Parker, of Cheam, Surrey county, England, some years since, instituted a very curious experiment in the management of wheat, of which we give the following abstract. In July, he deposited *one kernel* of wheat in a common garden pot; in August, he divided it into four plants, and in three weeks he again subdivided these into twelve, and so on until November, when the whole number from this one kernel amounted to fifty-two, when they were all set in the open soil. In July following, twelve were found to be dead, the remainder in full health. On the 19th of August, the crop was harvested, and the produce was 1972 stems, averaging fifty grains to the stem—being an increase of 98,600 grains! How wonderfully hardy and prolific is this plant, so indispensable to the com-

fort and support of man! Were it all lost, by some terrible revolution, and but a single grain left, under such a process as we have just related, how soon could all the fields of the world be smiling again with this golden and invaluable crop!

For the New England Farmer.

WHY ARE SO FEW YOUNG MEN FOND OF FARMING?

MR. EDITOR:—Though in this country a majority of persons are probably engaged in agricultural pursuits, I have the impression that comparatively few young men are really fond of farming. Why do the sons of farmers so frequently forsake the calling of their fathers, to engage in other occupations? It seems to me, one and perhaps the principal reason may be, because parents do not take sufficient pains to make home and the business of farming pleasant and attractive. Is it enough for them to clothe and feed the bodies of their children, but neglect to furnish the daily food which is necessary for the nourishment and full development of the social as well as the intellectual and moral faculties?

Are not boys upon the farm too often driven, as it were, to their work, instead of being so taught as to become interested in their employment, and thus learn to love it, and perform the labor as it should be performed by intelligent and accountable beings?

"Will not the sons, if rightly taught to toil,
Delight through life, to cultivate the soil?
And though they leave the spot which gave them birth,
Still draw their sustenance from Mother Earth?"

Another reason to which I will allude, though with diffidence, (for it is rather a delicate matter,) is the influence of young ladies. Do they not sometimes, to say the least, slight and shun the hardy, sunburnt sons of toil, and bestow their smiles and hearts' affections upon those with smaller, softer hands, and alas, too oft, with corresponding brains!

A third reason may be the position, or place which farmers occupy in the community. Though not generally regarded as "mudsills," they may, perhaps, with propriety, be compared to the firm, substantial foundations of a building; for upon them the whole superstructure of civilized society is built and depends for its support. In viewing a public edifice, we seldom observe the plain, unpretending, yet essential foundation on which it stands; but take particular notice of the building itself, upon which art and adornment may have been lavished, almost regardless of expense. So the learned, cultivated and refined members of society, by being conspicuous, attract attention, while the situation of the farmer is such that he is sometimes considered beneath observation, especially in populous, aristocratic places, which abound somewhat with snobs and nabobs.

The impression which prevails, at least to a considerable extent, that farming is not profitable, might be mentioned as another reason. But as the profitableness of farming is a "much mooted" question, and one which some of your correspondents desire to have discussed again in your paper, I will reserve that subject as a sort of groundwork for another communication.

A. C. W.

Leominster, 1862.

MAKE FARM LABOR FASHIONABLE.

At the base of the prosperity of any people lies this great principle—make farm labor fashionable at home. Educate, instruct, encourage; and offer all the incentives you can offer, to give interest and dignity to labor at home. Enlist the heart and the intellect of the family in the support of a domestic system that will make labor attractive at the homestead. By means of the powerful influences of early home education, endeavor to invest practical labor with an interest that will cheer the heart of each member of the family, and thereby you will give to your household the grace, peace, refinement and attraction which God designed a home should possess.

The truth is, we must talk more, think more, work more and act more, in reference to questions relating to home.

The training and improvement of the physical, intellectual, social and moral powers and sentiments of the youth of our country, require something more than the school-house, academy, college and university. The young mind should receive judicious training in the field, in the garden, in the barn, in the workshop, in the parlor, in the kitchen—in a word, around the hearth-stone at home.

Whatever intellectual attainments your son may have acquired, he is unfit to go forth into society, if he has not had thrown around him the genial and purifying influences of parents, sisters, brothers, and the man-saving influence of the family government. The nation must look for virtue, wisdom and strength, to the education that controls and shapes the home policy of the family circle. There can be no love of country where there is no love of home. Patriotism, true and genuine, the only kind worthy of the name, derives its mighty strength from fountains that gush out around the hearth-stone; and those who forget to cherish the household interests, will soon learn to look with indifference upon the interests of their common country.

We must cultivate roots—not tops. We must make the family government, the school, the agricultural fairs, the laboratories of our future greatness. We must educate our sons to be farmers, artisans, engineers, geologists, botanists, chemists—in a word, practical men. Their eyes must be turned from Washington to their States, counties, townships, districts, and homes. This is true patriotism; and the only patriotism that will perpetually preserve the nation.—*Gov. Wright.*

LUBRICATORS FOR BULLETS.—Formerly, tallow combined with wax was generally used as the lubricating composition for cartridges. It answered very well, when the old brown-bess musket was in general use, but since the rifle has become the general weapon of the soldier, this lubricating compound has proved to be unfit for cartridges. When tallow is kept in contact with a lead bullet, it exerts a corroding action on the metal, and a crust forms on the bullet, thus increasing its size, and rendering it incapable of being rammed down with ease and rapidity in a rifle. It has been found that paraffine does not exert any chemical action upon the lead, and hence it is now generally employed as the best cartridge lubricant. It is one of the products of petroleum and coal oil.

THE CURCULIO.

Mr. R. H. Phelps, of Windsor, Ct., after carefully observing the habits of this great enemy of the fruit-grower, some time since, announced in the *Homestead* his conviction that the black knot or wart on plum trees is caused by the curculio, and is one of the mediums by which it perpetuates its species. Previous experimenters and observers had demonstrated the fact that the brood which is hatched from eggs deposited in plums and other fruit, instead of remaining dormant until the next year, as had been supposed to be the case, came from the ground in some three weeks after leaving the fallen fruit, perfect insects. And here, so far as we are aware, our knowledge of the history of the curculio ends. How do this second generation live? how do they perpetuate their race? and what becomes of them? are questions that have been asked, but not satisfactorily answered. Mr. Phelps believes that, "as the second brood finds no place for propagation after the fruit has fallen, it resorts to the bark of the tree, and there deposits its eggs." To meet the inquiry, how do the grubs hatched in the knots, reach the ground? which might be asked by those who regard the falling of the fruit as the natural way of descent for those bred therein, the writer says: "They pass down to the ground by a thread which they spin in their descent, while those in the plum pass into the earth after the fruit drops." He does not say that he has witnessed such descent—he barely states the fact, and then adds: "The last brood of the season remains in the ground in the larva state through the winter, and I now have specimens which can be examined by any person. One of them in particular has taken a notion to spin its cocoon directly between the glass of the goblet and the earth which it contains, affording a lucky chance for observing its operations."

Mr. Phelps calls attention to the facts that the black knot is seldom or never found upon the body of a full grown tree, or where the bark is hard and thick, but chiefly on the branches and tender twigs, where the insects can easily puncture, and that a far greater number of knots make their appearance on the tree the latter part of the season, as strong presumptive evidence of their being caused by the curculio. Maggots or grubs have been noticed by others in the black knot, but whether as cause or effect has not been positively known. Mr. Phelps found in a single knot forty-eight grubs, and is very certain that most contain more than one egg or larva. That these are embryo curculios he is quite positive, for reasons which we give in his own words:

"On the 28th of June last, I took several worms from the knot of a plum tree, and put them in a cup of soil in a warm place, and in 19 days from that time one of them turned into the chrysalis or

pupa; in a few days more it cast off its skin, and passed from a chrysalis to a perfect weevil or curculio. This specimen had been disturbed so often in examining it, that it formed no cocoon for its transit. In every other instance, the grub formed a cocoon by continually turning and twisting its body, thereby making a cavity adapted to its size by gluing together the particles of dirt with a gum or web from its mouth, with which it lined its cell, in which it changes from the larva to the chrysalis, and thence emerges the perfect weevil or curculio, and ready to begin its depredations. The difference in the period of its change appears to depend upon the maturity of the worm, as in some instances they changed under my own eye in one day after entering the earth. The time occupied in this transformation to the chrysalis was only about one hour. On the 23d of July some worms taken from a plum, and others from a knot on the same limb, were put into two separate pans of earth, and each labelled. One from the plum changed to the chrysalis the 26th, and two from the knot the 27th. These grubs were precisely alike in appearance, being about three-eighths of an inch long, of a yellowish white color, and with yellow heads. Later in the season they incline more to a reddish color. The pupa is of a perfectly white color, almost transparent."

This theory affords some grounds for the hope that, by the seasonable destruction of these unsightly excrescences, we may diminish more or less the numbers of an insect which threatens to prove the worst enemy the fruit-grower has to contend with. In common with plums, our apples and pears suffer by the ravages of the "first brood" of curculios; but as the branches of these trees show no black knot, how is the race perpetuated in our common orchards?

PROTECTING ANIMALS FROM STORMS.

I believe that farmers, generally, are not aware how much loss they sustain in the flesh of their domestic animals, and how much they suffer during cold storms of rain in the summer, or at any other season of the year. Warm showers never injure animals; indeed, they appear to have a good relish for such a sprinkling as they frequently get, providing it is not as cold as ice. Most animals will endure pretty severe cold as long as they can keep dry; but as soon as their bodies have been wet and kept wet, evaporation commences. And as evaporation is a cooling process, the heat of their bodies is carried away very rapidly; and the sudden transition from heat to cold chills them in a very short time, and injures them more than a severe storm in winter.

Animals will endure a very sudden change from cold to heat, with impunity; but sudden changes from heat to cold are often attended with very injurious consequences. We are apt to think, because it is summer, or not freezing weather, that a storm of rain will not hurt our animals. But could they communicate to us their feelings during a storm of cold rain, there would not be so much negligence about protecting them, especially during the cold and stormy days and nights of autumn.

I well remember, that about twenty years ago, there was a severe rain storm in the month of June; and although our sheep had been shorn more than two weeks we thought they ought to be brought home to the barn. But many of them were so cold and feeble in consequence of the rain that it was necessary to go after them with a wagon.

About the first of July, 1861, there was another very cold storm of rain, which swept away hundreds of sheep in the town where I reside. One farmer lost about sixty of his choicest sheep, although they had been sheared several days before the storm came on. I have heard of more than three hundred lost during the storm.

It is infinitely better for animals to keep them in a stable or shed, where they cannot get a mouthful of food for twelve successive hours, than to allow them to be exposed for only two hours to a storm of cold rain.

When I was accustomed to keep sheep I was always careful to let them have a benefit of a shed, if they needed it, not only in winter, but during the summer; and it was very unusual that our horses and neat cattle were left for one hour in the field during a cold storm. Cold storms not only make horses look bad, but they do really injure them, by rendering them stiff and dull; and they often contract severe colds, which, in many cases, will superinduce catarrh and glanders.

Young calves and colts often suffer extremely from exposure to cold storms, even in summer; and to shelter them, will be time and money well appropriated. "A merciful man regardeth the life of his beast."—S. E. T.,—in *Country Gentleman*.

THE JAPANESE IN ENGLAND.

The London correspondent of the *Manchester Guardian* writes as follows:

The Japanese Ambassadors are the most indefatigable of "lions." They are to be met everywhere, and go through their sight-seeing with a stolid patience which does as much credit to their strength as to their self-control. They prefer London to Paris, as they have not been made so much fuss about, and are allowed to see things more in their own way, and at their own convenience. Paris was done for them by official programme. The draughtsman is really a clever fellow in his art, and perfectly indefatigable as a sketcher. He carries the breastfold of his robe filled with note books, in which he works with great rapidity, and in outline. His drawings of animals at the Zoological Gardens are described to me by a friend who has seen them—for I have not yet had that privilege—as singularly faithful and spirited, and as showing a full knowledge of perspective. The monkeys and the bears were his favorite subjects, as affording most scope for the fun which evidently enters very largely into their way of viewing things. They are not at all carried away by the English ladies. On the contrary, they do not scruple to say that they think us Westerns, of both sexes, a singularly ugly race. It is very wholesome to be reminded of the difference of tastes in this way, for of all the ugly specimens of humanity, in Western eyes, the Japanese Embassy, by universal admission here, includes the flower.

For the New England Farmer.

BORROWING AND LENDING.

MR. EDITOR:—The practice of borrowing and lending may be well enough, sometimes—in fact, may be necessary, in some cases; but they should both be kept within bounds, and under proper regulations. This practice, I suppose, is nearly as old as the creation. Society could not well subsist, if neighbors were not disposed to accommodate one another in this way. Let a man's business or wealth be what it may, he cannot be so independent, as at no time to stand in need of borrowing. Unforeseen accidents may happen at such a time, and in such manner, as to make it impossible for him to purchase the thing he immediately wants. The thing may not be for sale anywhere in the neighborhood, so that he is obliged to borrow, or stop the work.

But this practice may be carried too far. It may be carried so far as to be prejudicial both to the borrower and the lender. It ought to be kept under such limitations as to be mutually beneficial. "The borrower," says Solomon, "is a servant to the lender." This is sometimes the case. But it more frequently happens, that the lender is a servant to the borrower, and is obliged to serve him, not only in lending him what he wants to borrow, but in running after the things which have not been returned. If the borrower sets out with a determination to live by borrowing, without any intention of returning, or repaying in kind, his intention will soon be discovered, and he will find it impossible to borrow of any who are not slaves to his wishes. So, too, if he habitually neglects to return what he has borrowed, he will find that the lender will not endure the servitude of running after the things which have not been returned.

They who lend household articles, or mechanics' tools, or implements of husbandry, generally expect to receive their own again unhurt—the very thing, where it can be done; where this cannot be done, something equivalent. But if they find that what is lent is lost, or forgotten, or broken, or wilfully retained, they will soon grow weary of obliging in this way; more especially if they be ill treated when they go after and ask for what belongs to them. The longer a thing has been lent, the more likely it is that it will never be returned, without being sought for by the lender, which is always very unpleasant business.

The lender ought always to be the judge of the propriety of lending, or withholding his hand, let the borrower clamor as he may. For if the lender is obliged to lend whatever an unprincipled borrower wants, he can with propriety call nothing his own, let him possess what he may; for there will be borrowers enough to deprive him of all his property. Still, it is always best to cultivate an obliging disposition. He who is altogether unmindful of his neighbor's interest, may expect to be paid down in his own coin; for his neighbor will be unmindful of him. Men grow tired of lending to those who never think of returning. In such cases, the borrower is worse than the beggar. The beggar does not deceive, as in his case no return is expected. The borrower may do much injury to others; the beggar cannot do much harm, as he has no power.

Borrowing frequently occasions the loss of much

time and labor to the lender. Besides, it tries his patience to be obliged to run over to neighbor Slack's after the tools he lent him three months ago, and after his arrival there, to be obliged to wait two long hours, while neighbor Slack and his boys are rummaging all over the farm to find the tools which were thrown down in the very place where they were last used. No person ought to borrow what he does not intend promptly to return. For if lenders are obliged to run after their own tools, every time they want to use them, they virtually become slaves to the borrower.

In money matters, they who lend money for the accommodation of others are entitled to a prompt return at a specified time, with interest thereon. It is not right for a person to borrow money and promise to pay what he knows is not in his power, and never will be. This is fraud, and in this way many are ruined. It is wrong to make promises that cannot be performed, especially when there is no intention of performing them. Still, where unexpected losses and disappointments take place, allowances should be made. For there is no fencing against misfortunes. But where a man acts with fraudulent intentions, he ought to be condemned. For many have been deceived and ruined by fair promises and worthless securities, when in fact the promisor had no intention of fulfilling his engagements.

The habit of borrowing and lending farm tools, and other articles, where there is no great necessity for it, and which a little prudent forethought might prevent, is a very bad one, because it leads to unpleasant results, and creates much ill feeling in the neighborhood. It makes the lender a servant to the borrower. Whenever he misses any of his tools he is obliged to run over to neighbor Slack's, or to neighbor Easy's, or to neighbor Doolittle's, and see if he can find them. He may have forgotten to which of the three he lent them. And after spending the whole forenoon in pursuit of his tools, he returns to his work with feelings better imagined than described. No one would be unwilling to lend any of the common articles in use, if he could have a reasonable assurance that they would be promptly returned. But to be obliged to run after them every time they are wanted, is a great trial to one's patience.

Warwick, Mass., 1862. JOHN GOLDSBURY.

REMARKS.—Excellent. If every farmer in New England would read the above, and be guided by the reasonable and incontrovertible truths which it lays down, there would be greater prosperity and a less amount of anxious, unhappy feeling, all over the land.

DOG POWER.

Dog power is coming into use in New York to a large extent. Why it has not before been applied extensively all over the world, and those huge mastiffs allowed to lie about in the sunshine, and consume as much food as the children of a poor man, passes comprehension. The German ash-mongers and rag-pickers are teaching people wonderful lessons in the way of economizing power. Three stout dogs, harnessed to an ash-cart, draw a load nearly equal to a horse. They work with a will, and guided by a man—and often a

woman—in the shafts, draw a load which no individual, unaided, could master. It is wonderful to see their strength, and remarkable docility and teachableness. When the master stops, they instantly rest, and at the slightest signal they straighten out their traces. Only a kind word, often a mere look, from the brute who so often kicks them, they gratefully receive. More than that, they recompense it with eager effort and wonderful toil at the drag rope.

THE TIDES.

These phenomena have, in all ages, excited curiosity, and in many instances they have produced wonder at their extraordinary height and fury. It is related of the soldiers of Alexander the Great, who were natives of the Mediterranean shores, that when they reached the confines of the Indian Ocean, and saw its waters rolling up to a great height, and then flowing back, twice every day, they became alarmed, and attributed the phenomena to a special interposition of the deities of the country which they had invaded. Various remarkable theories have been advanced regarding the tides. Many of these are so truly absurd that it is hardly worth while to refer to them. Persons find it difficult to understand why the tides are higher at one time than another, and why they rise to the height of sixty feet in the Bay of Fundy; forty feet in the ports of Bristol, England, and St. Malo, France, and only rise to a few feet in height at New York and other places, while they are scarcely perceptible in the Baltic and other seas. Descartes was the first philosopher who advanced the theory that the tides were due to the influence of the moon, but Newton was the first who worked out the problem and discovered the true cause. Descartes believed that the moon acted on the waters of the ocean by pressure; Newton demonstrated that it acted on the ocean by attraction; that instead of pressing the waters it rolled them up directly under it, and also at its antipodes at the same time, thus producing the two tides every day. The tides are attractions of both the sun and moon. If the earth had no moon, the attraction of the sun would produce two tides every day, but their ebb and flow would take place at the same hours, not varying as they do now; these tides would also be much smaller than those of the moon. Although the mass of the sun is far greater than that of the moon, and though attraction is in proportion to the mass, yet it is also inversely as the square of the distance. As the sun, therefore, is four hundred times more distant than the moon, the attraction of the waters of the sea towards the sun is found to be about three times less than those of the moon. There are really two ocean tides, the lunar and solar, but the latter is absorbed by the former, which is wholly observable in respect to the time, the solar only, as it influences the height of the tidal wave. That caused by the moon is three times greater than that of the sun, and it follows the moon's motion around the earth, rising and falling every twelve hours, and each succeeding tide later by three-quarters of an hour than the preceding one, exactly in accordance with the positions of the moon, or, as it is commonly called, its rising and setting.

THE HONEY-BEE'S SONG.

WHAT THE BEE SINGS TO THE CHILDREN.

I am a honey-bee,
 Buzzing away
 Over the blossoms
 The long summer day ;
 Now in the lily's cup
 Drinking my fill,
 Now where the roses bloom
 Under the hill.
 Gayly we fly,
 My fellows and I,
 Seeking the honey our hives to supply.

Up in the morning—
 No laggards are we—
 Skimming the clover-tops
 Ripe for the bee,
 Waking the flowers
 At dawning of day,
 Ere the bright sun
 Kiss the dew-drops away.
 Merrily singing,
 Busily winging

Back to the hive with the store we are bringing.

No idle moments
 Have we through the day,
 No time to squander
 In sleep or in play ;
 Summer is flying,
 And we must be sure
 Food for the winter
 At once to secure.
 Bees in a hive
 Are up and alive—

Lazy folks never can prosper or thrive.

Awake, little mortals,
 No harvest for those
 Who waste their best hours
 In slothful repose ;
 Come out—to the morning
 All bright things belong—
 And listen awhile
 To the honey-bee's song.
 Merrily singing,
 Busily winging,

Industry ever its own reward bringing.

MOTHS.—A correspondent of the London *Field* recommends tallow candles, (common,) done up in paper, and put in the sack or drawer with cloths, to prevent moths destroying the cloth.

REMARKS.—Nonsense. The moth-miller cares no more for a tallow candle than for the fifth wheel of a coach. Most of our insects are very hardy, caring little for wind or weather, and will never "die of aromatic pain." We once packed some small skins in the centre of a cask of tobacco leaf and stems, but the miller went there, deposited her eggs, and the furs were ruined. This shows that they are not at all delicate, and care nothing for tobacco, camphor, or even tallow candles. Quite likely, some person had a *tight* closet where there happened to be a tallow candle, and the safety of the furs was imputed to some efficacy in the candle, rather than to the *tightness* of the closet. Expensive cedar closets are frequently constructed, with the idea that the rather

pleasant odor of the cedar is sufficiently disagreeable to the moth to keep him away from articles of clothing deposited there! This is a mistake. The strongest instinct prompts the miller to seek the means of perpetuating its kind, and no trifling impediment will prevent it.

But the preservation of furs, or articles of clothing, is perfectly simple, cheap and easy. *Shake them well, and tie them up in a cotton or linen bag, so that the miller cannot possibly enter, and the articles will not be injured*, though the bag is hung in a woodhouse or garret.

This is cheaper than to build cedar closets, and better than to fill the bedclothes and garments with the sickening odor of camphor, tobacco, or any other drug.

TAN-BARK AS A MANURE.

MESSRS. EDITORS:—I have observed various statements as to the nature and value of spent tan-bark applied to crops or tillage land. Having made some experiments in a small way, bearing on the question, I will give the results.

On the 1st of July I sowed broadcast, on good alluvial soil, well-pulverized carrots, ruta-bagas and cabbage. I covered them with three-fourths of an inch of tan bark, quite fresh from the tannery. The growth was good, and crop as large as the season would allow.

I also planted potatoes in the same way, covering with four to six inches of fresh tan bark. They had no other care, the weeds not growing. The crop was fair under the circumstances—indicating no bad effect from the tannic acid of the covering.

I also raised good corn where tan was mixed with the soil in the proportion of one to four.

From these facts I have not hesitated to use it freely as an absorbent in my stables. My cows are bedded with it to a depth of three or four inches. It is hoed back into the drop as fast as it becomes wet. It then becomes thoroughly mixed with the manure, making about double the bulk. It is daily loaded into a cart and hauled to the fields, where it is deposited in heaps.

The great advantages I get are a more perfect distribution of the manure in spreading—economy in getting all the manurial qualities on to the ground—neatness of stables, and saving all the trouble in plowing, drilling in seeds, and cultivating, when coarse straw manure is used, as it must be, or one year lost in rotting it.

Dried muck is undoubtedly the best. But I can't get it; and it is much more expensive in procuring and hauling, where tan is within reach. My land is alluvial, a little inclined to be heavy, and I anticipate good results from the light, open nature of the tan.

I procure my supply (about 150 loads) in dry weather, and place in the bottom of a bay, convenient for use. Frost only crusts over the top, giving no trouble.—*Country Gentleman*.

THE reasoning power is the corner-stone of the intellectual building, giving grace and strength to the whole structure.

For the New England Farmer.

MR. A. G. SHELDON'S FARMING.

MR. EDITOR:—Spending a few days among the scenes of my childhood, I visited the residence of your correspondent, Mr. A. G. SHELDON, the "Wilmington Farmer," whose "Practical Observations on Farming and Stock Raising" are in process of printing, and about to be offered to the public. I had the pleasure of looking at his orchard, now in full bloom, from side to side, and a more beautiful sight of the kind I never beheld. Nature seems to be very propitious this year; certainly she promises fair for a good crop of apples. The trees, set in straight rows, with smooth, healthy trunks, and well expanded tops, tell a fair story for the hand that reared them.

Passing through the orchard, we went through the reclaimed swamp, and what a contrast met my gaze. Twenty acres of beautiful, smooth, mowland, just as green as a rich lawn in spring, took the place of the sterile, blueberry swamp that occupied the ground when I was young. What can not the hand of industry accomplish? This land promises to yield a bountiful crop for years to come. Sure, it must be our best land in New England.

Where this beautiful orchard now stands, was, a few years since, a ledgy hill, full of stones and covered with stunted pines. Taste and industry have made it what it now is, not only beautiful to view, but generally bringing to its owner a handsome income. My mind involuntarily came to the conclusion, that the man who had brought about such a change in the face of nature before me, must, by condensing the results of his experiments and observations, bring out a book that would be worth double its cost to the young yeomanry of New England.

The piggery and barn were next visited. Two model sows, heavy with pig, attracted attention. In form they were symmetrical. On inquiry, I was informed by Mr. S. that he had named them the "Bay State breed." He said they originated from the "Mackay," the "Columbia County," the "Cheshire County," and several other breeds mixed; that they were the best breed and cheapest kept of any in market. And he comforts himself with the hope that in a few days he shall offer for sale some noble pigs, that have never taken a ride in the cars, or visited the Brighton pig-pens.

In looking over the neat stock, I observed three pairs of heifers of different ages, as nicely matched as you ever saw three yoke of oxen in a team. There were one pair of blacks, bearing strong marks of the old black Spanish, one pair of light reds, with long horns, showing the Denmark strongly developed; and one pair of twins, dark reds, resembling the Devon.

These mixtures form our "Native Stock," and must be fine for dairy uses; at least they appear so, judging by the large milk sacks they carry. The herdsman informed me he had been obliged to reduce the keeping of the long-horned reds to coarse meadow hay, in order to dry them before calving. And he likewise said of one of the blacks that had not yet calved, he had milked her once per day for some time, and that day twice to prevent swollen udder.

I think our brother farmers and mechanics, dealing in stock, would do well to select the best breed,

not only in cows, but hogs, and look well to purchase those that are free from disease.

East Wilmington, 1862.

E. E. CARTER.

OPEN AIR GRAPE CULTURE.

In the *Farmer* of May 31, we noticed a new work by Mr. JOHN PHIN, upon the subject of *Open Air Grape Culture*. A further examination of the book has convinced us that some of its pictorial illustrations and teachings may be made very useful to a large number of our readers. We have, therefore, sent to the Publisher and obtained several cuts, which will be quite useful to those not entirely conversant with the management of the grape vine during the several stages of its growth. Some of these cuts relate to the vine in its earliest condition, and show the manner of setting the plant, disposition of the roots, and raising plants from layers. Those that we give to-day relate to the care of the vines during the first, second and third years.

The cut which follows illustrates the author's idea of mulching the plant. He says, "If an abundance of grassy weeds, litter, stable manure, or similar matters can be obtained, the best plan is to mulch the plants deeply for at least three feet every way from the stem,"—and adds, "that, before applying mulch of any kind to a young vine it will always be advisable to raise the soil around the stem to the depth to which it is intended to lay the mulch, as represented in Fig. 1.

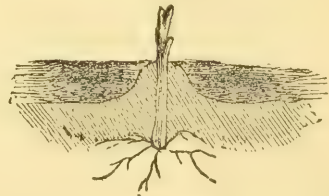


FIG. 1.

LATERALS are small shoots which spring from the axils of the leaves, (the point which they join shoot.) As these laterals absorb much of the nutriment which would otherwise go to the increase of the stem, they should be carefully pinched out after they have made one or two leaves. If removed before they have made some growth, the bud at their base is very apt to *push*, as it is called (that is, to grow,) which should be avoided, if possible.

Fig. 2 shows a young shoot of the current year with a lateral (B) springing from the base of the leaf L. This lateral should be pinched off at the cross line. If removed entirely or too soon the bud (C) will be apt to push, and destroy our prospects for next season.

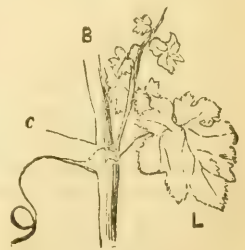


FIG. 2.

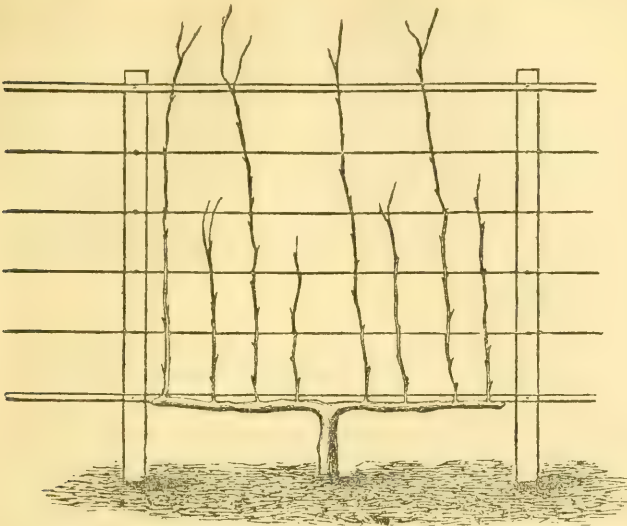


FIG. 3.

WINTER PROTECTION OF YOUNG VINES.—At the close of the season, the vines may either be bent down and covered with earth in the manner usually adopted for covering raspberries, or they may be left upright, and tied to the stakes, a mound of earth being raised up around each, such mound being at least 18 inches high. The soil of which it is made should be taken from the centre of the rows, as, if we take it from about the plants, we only cover the stem to expose the roots.

Where the vines are left tied to the stakes, we prefer to leave them unpruned. True, most of the wood gets killed, but this is of little moment since it is to be nearly all cut away at the spring pruning.

MANAGEMENT DURING THE SECOND YEAR.—As soon as the severe frosts of winter and early spring have passed away, uncover the young vines, and if not already pruned, cut them to a good bud within 9 to 14 inches of the ground. They should be shaded for a few days from the sun and cold, which may be very well done by sticking a shingle before each, though two shingles placed so as to form an angle in which the vine may stand, will be better.

MANAGEMENT DURING THE THIRD SEASON.—The trellises having been constructed in such a manner, that the lowest slat or wire may be just below the base of the second year's shoots, that is from 9 to 14 inches above the surface of the ground, these two shoots should be firmly, though not tightly, tied to the lower slat, and all buds should be rubbed out except three on each arm, (or shoot,) thus leaving six on each vine. Each of these buds should produce a shoot which, if the ground has been in

good condition and the plants healthy and properly set out, would reach from 12 to 25 feet unless stopped, and as it is upon every second one of these that we depend for our next year's supply of fruit, they deserve and will require great care and attention in order that they may finally be of equal strength and well ripened. Every second shoot should be stopped when it has made a growth of about two feet, and if any of the others should so far outstrip their compeers as to reach the top of the trellis much before them, they should be stopped also, though except in the case of excessive growth all the shoots had best be allowed to grow on until the first of September, when they may all be stopped at once, unless it be deemed best to allow the weakest a few days' longer growth, in which case it is surprising how soon they will overtake their companions.

Stopping, or pinching, consists in breaking off the end of a shoot, and its immediate effect is to arrest the further growth of the cane, or at least its further lineal development, for the time being.

MANAGEMENT OF FRUITING VINES.—At the close of the third season we ought to have a vine such as is shown in Fig. 3, consisting of a stout, strait, clean stem, 9 to 14 inches high, from the top or head of which springs two horizontal arms, each bearing two well ripened canes, 8 to 10 feet long, and two smaller shoots of from two to five feet. The two canes ought next season to produce three to five pounds of fruit each, and their proper care during the winter is worthy of our best efforts.

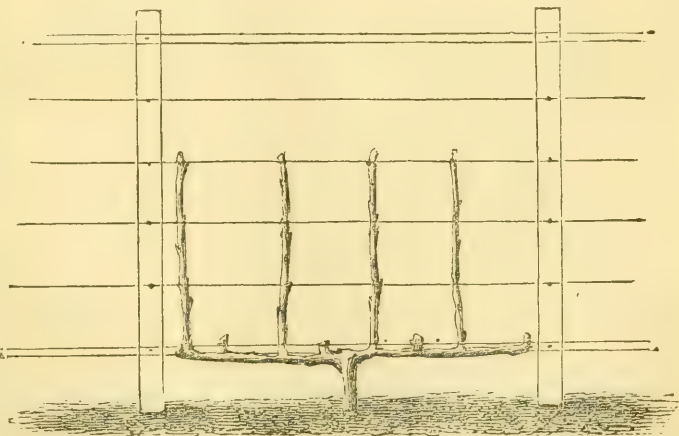


FIG. 4.

WINTER PROTECTION OF THE FRUITING CANES.—The method which we have proposed, is to place the trellis 8 to 12 inches in advance of the vine, the stem being brought forward beneath the first slat or rail, and tied up as usual. It will

be readily seen that very little bending is required, and even that is so distributed over the whole stem that no injury can result. No practical objections that we are aware of exist to this method.

Before bending down the stem, the vine should be pruned. This consists in cutting off the long shoots to a length of four feet, (the first season,) and the alternate short ones to the *lowest good bud*. The vine so pruned is shown in Fig. 4. Then the stem, having been bent down, it will be easy to fold the flexible young canes so as to lie compactly together, when they may be covered with earth. The soil for this purpose must be light and sandy, and should be so disposed that water will not penetrate to the vines. If light soil cannot be had, the vines may be pegged down and covered with the branches of evergreens, though it is improbable that these could be obtained in sufficient quantity to protect a large vineyard. Leaves or straw would answer, though they might harbor mice, which would soon destroy the vines.

The vines should be left covered as long as possible, but must be exposed before the buds begin to push in the spring.

A CHEAP ICE HOUSE.

I saw in the *Farmer* of Nov. 21st, a plan for an Ice Stack which may be a good one, but with your permission I will lay before your readers a plan for an Ice House, which, for availability, cheapness and utility is probably hard to excel. I have tested it two years and found it to work like a charm.

In the first place I selected a piece of ground with a slope of one foot per rod, under the shade of a jack oak grove; procured 45 rails 12 feet 6 inches long, then built a four square pen four rails high, and filled it 15 inches deep with sawdust, then made a straight edge 12 feet long with a transverse piece on each end of it three feet long, took one handle off a cross cut saw, then took a one-half inch rod of iron and turned a right angle hook six inches long on one end, cut it four feet long and turned a ring as a hold for the hand on the other end, took a brace and five-eighths bit, a stout plank, two hands, and a team and sleigh, and went half a mile to a pond—took my fixtures and marked the ice off into squares of three feet; with my saw with one handle off sawed out the squares, and bored a hole near one edge of the blocks with the bit, and with my hook raised one edge of the block a few inches, slipped the plank under, gave a steady pull, and the cake was on the sleigh in a "jiffy."

Thus we continued, until we loaded nine blocks ten inches thick. I then built a pyramid of ice, nine feet square in the rail pen, leaving 18 inches of space between the ice and wall; this space I filled up with sawdust well packed in, and put dust 10 inches thick over the ice. My stack of ice was nine feet square and seven feet high. In order to keep the sawdust from sifting out at the crevices it will be necessary to use a little straw about it. I then, after building up my pen, covered with sheathing boards,—the work was done.

I have tried the above plan two years, and saved plenty of ice until ice was frozen the fall afterwards—indeed, we have plenty in the pen now, Dec. 2d, put up last January.

It will be necessary to give it some attention through the spring, and keep the dust packed well up to it at the sides.

My ice has kept so well, that there has not been waste enough from it to moisten the ground around the pen, although I have used the walls of dust two years without renewal. I last winter cleared out the bottom of the pen and let the ground freeze hard, and put in new dust below and on top of the ice. Farmers, try it, and you will continue it, doubtless. Ice is so delightful in summer, and two hands will fill a pen in two days.

—P. K. HONN, in *Prairie Farmer*.

For the New England Farmer.

"IS FARMING PROFITABLE?"

MR. BROWN:—I see the above question is often asked in your journal. It might as well be asked, is trade profitable? Can commerce be so managed, as to secure a competency to him who invests his capital in ships and merchandise, to send to foreign ports? Can the lawyer, with all his hard study and diligent application of knowledge to the various exigencies of life, secure a living for himself and family? Can the mechanic, after ceaseless labor and toil, earn his daily bread, or anything more?

Now, sir, the man who is incompetent for what he undertakes will not succeed in either of the above occupations, and it is the same with farming. He who would earn his bread by farming, and anything more, must have grounds, and must know how to cultivate these grounds,—he must know what kind of seed is suitable for peculiar soils,—he must know when to sow, and when to plant, and what preparation is necessary before putting the seed into the ground. We not only have the promise of "seed time and harvest," but we have the assurance of a crop, if the right seed is put into the right ground.

Let a man select a sterile piece of land, and, perhaps, take the wrong kind of manure, spend fifty dollars in preparing an acre of ground for the seed, and he may not find a crop that will half-pay him for his labor and expense of preparation; but let him take a suitable piece of ground, and with less than half the labor and expense, the crop will pay him 100 per cent. on his investment. It is so in every pursuit of life. In order to succeed in life, a man must understand his business, and must apply himself to whatever he undertakes. Some never succeed in anything. From the want of common understanding, they fail in everything, while others, with much less labor and bustle, succeed in whatever they wish to pursue.

In all probability, no investment of a small amount pays better, than what is judiciously expended in farming. Every dollar rightly expended is generally sure to pay double, or treble. The gains are slow, to be sure, but the investments are generally light. Let a man be so situated that he could advantageously use \$50,000 in preparing ground for the seed, and he would be more surely remunerated than he would in buying merchandise, and selling, for cash, and on time, as business is usually conducted.

The farmer is often discouraged, because of small gains. He forgets the small amount invested. The average of those who live by farm-

ing in New England are not worth over one to two thousand dollars. How could a man with \$1000 support a family in trade, with bad debts, losses on goods purchased, &c. &c. I think, sir, from careful observation, that it will appear, that more men have become rich,—I mean, what country people call rich,—from farming than from any other pursuit. A large part of the farmers in New England commence poor, with a family, and work hard. How would they succeed in trade, under the same circumstances? DELTA.

Boston, May 31, 1862.

For the New England Farmer.

THE SLOW PROGRESS OF AGRICULTURE.

Many persons complain of the tardy advances which agriculture has made. They seem to think there is a goal of perfection which it is time it had reached, yet have a vivid sense that it is far from it, and despair—as well they may—that it will ever reach it. Perfection is a useful ideal word, yet its full significance is hard, if not impossible, to realize. A man may work his farm fifty years in regular succession, and observe all the different facts or phenomena which his crops present, and yet be unable frequently to avert disappointment. The truth is, agriculture has its “dissolving views,” as well as other vocations.

There is a cause for this. Though the laws of nature always work alike, they present themselves in so many combinations that human sagacity cannot foresee their results. There are self-evident facts in agriculture, most prominent among which is, that manure and clean culture facilitate the growth of plants; but as to the kind of manure to be used, the peculiar combinations of different fertilizing elements, their effects upon different soils, the various meteorological influences, &c., these are matters of doubt, and too frequently bring disappointment to the farmer, as they must always do.

Besides, men die, and much of their knowledge goes with them, while what they leave in books or stored in the minds of their friends, must be learned by each succeeding generation, to become useful facts. But comparatively few ever obtain this knowledge. Could men live longer the world would be wiser. Columella, Cato, Pliny, &c., taught the leading facts of agriculture, and it is for us to do what we can by way of improvement. But the various soils, seasons, minds, &c., pertaining to husbandry, and the doubts, hopes, prejudices and reactions, render it slow in progress, and place the goal of perfection beyond the pale of reasonable hope. Nor, indeed, is it needed. Agriculture has always subserved its purpose; it has always fed mankind, and always will, in spite of its irregularities and short-comings.

West Medford, June, 1862.

D. W. L.

HOW THE BEAN CLIMBS THE POLE.—Professor Brewer, of Washington College, Pa., communicates to *The American Journal of Sciences and Arts* the result of some experiments made by him on climbing vines—the hop, the Lima bean, and the morning glory. He finds that they will climb around a transparent glass pipe just as well as anything else, and that they are most ardent in their embraces when the pole is warmer than the

surrounding air. During the day, the vine is attracted towards the light, but at night, and especially on cool nights, it turns to the pole. He learned, also, that the color of the pole makes no difference; the caressing instinct of the vine has no prejudice against any shade. The element of constancy is very largely developed, the vine, after it has reached its pole, showing a much stronger tendency to wind around it than it did before to reach it.

CURIOSITIES OF LEECH CULTURE.

Many of those who have assiduously cultivated the leech have amassed handsome fortunes, the trade being very remunerative. A prosperous merchant, away in some far district of Poland or Wallachia, will keep some two or three hundred of the inhabitants of his district in full employment collecting for him, paying them on the best of plans, according to their labor—namely, so much a dozen, according to the age and quality of the leeches which they bring to the depot. The animals must be all gathered before the heat of the day sets in, and at once carried home to the capacious reservoirs provided for their reception, where they are at once counted and paid for. Packed in clay or bags, they are at certain seasons dispatched by fleet conveyances to Marseilles, or direct to Paris, change of horses on the way being insured, when necessary, by liberal payments. The mode of packing the leeches for transport is much the same in most of the breeding districts. Some are placed in boxes—first a layer of moist, white clay, then a layer of the little animals, and so on till the chest is full. Some of the merchants pack the leeches in bags as soon as they are taken out of the marshes. Each of these bags contains about sixteen pounds weight, and it is necessary that they should be hung up for a period till the water is drained out of them, and then the animal rolls itself up into a kind of ball, and lies in a semi-torpid state till it is, perhaps, revived on its journey by a dip into some half-way pond. The boxes or bags containing the leeches are carried in light wagons divided into the necessary compartments. Relays of horses and drivers are always kept in readiness at the various stages of the journey; but, notwithstanding the greatest care may be taken in their transport, immense numbers of animals are killed. Severe frost or great heat is equally fatal to them.

CUCUMBERS AND MELONS.

“BLAST THE BUGS!” What is the matter, my friend—you seem disturbed—one ought to be serene and happy in such a place as this. “Matter—disturbed,—look at my melons, cucumbers and squashes.” Look, yes, where are they? “Sure enough, where are they—all gone to the bugs.” Well, friend, plant again, and then send to Parker, Gannett & Osgood’s, in Blackstone Street, Boston, and procure their famous *plant protector*, put it over the plants, and you will have no more reason to “blast the bugs.” When the season for their depredations has passed, one or two hundred of these protectors can be packed in a single flour barrel, and preserved for future use.

For the New England Farmer.

RETROSPECTIVE NOTES.

"THE BEST GATE."—In the weekly issue of this journal for May 10th, and in the monthly for June, will be found an article with the above heading, which contains information as to the construction of farm gates, which may be valuable to not a few. There must be in every town of every State, with the customs of which we have any acquaintance, a good many farmers who are tired of the trouble, loss of time, and other inconveniences which are the necessary accompaniments of the use of bars in the place of gates, and who would readily substitute the latter for the former, if only they were made acquainted with a method of making a gate without employing a mechanic, or without paying as much for it as mechanics generally would charge. Now this article under notice supplies just the information which such farmers, and all, indeed, who lose a great amount of time and patience every year with bars, are greatly in need of. It tells them how to make a gate which shall be cheap, lasting, effectual as a barrier, light, and not likely to sag or get out of order. This gate, too, beside all the above advantages, possesses the still greater recommendation of being so simple and easy of construction, that it may be made by every one who owns, and who can use, the most common tools. "Any one can build such a gate and hang it—the posts being set—in two hours."

Let all, then, who need a gate, or gates, read and inwardly digest this article. To hundreds it would be worth, in comfort, convenience, saving of time, &c., quite a little pile.

We have, for years, had a similar gate under observation, and from that, and our own "idea," we should build any gate hereafter needed a little different from that described. We should have an upright stiffener in the middle, and a facing to the board at the latch end, between which the latch should play. We would use no oak or other hard wood, but only pine, or other light wood.

"MANURES."—On page 256 of the June number of the *Farmer* may be found a brief paragraph from the pen of S. P. M., a Maine farmer, in which he gives a very sensible opinion in regard to home-made composts and commercial manures, which, if only heeded and acted upon by farmers generally, would be greatly to their advantage. This brief, but pithy paragraph,—a good specimen of the *multum in parvo*,—was called forth by the late inquiry of a correspondent—"Will Concentrated Manures Pay?"—and gives the inquirer, and all others, to understand that there is something which will pay far better. What this something is, and how it may be procured or manufactured, and how well it acts on the farm of S. P. M., he has told the readers of this journal in so small a compass, and with a wisdom as condensed as that of the proverbs of some proverbial philosophers, as to make it a vain attempt to condense his wise answer any farther. Let the reader refer to and read the two sentences in which the answer to the above question is so wisely and warily given, and then let him go to work and save every particle of everything that will fertilize or enrich his land, composting the various materials in the most approved manner, and his crops of grass, grain, roots, fruit, and all

else, will be more luxuriant than if he had expended fifty dollars for a ton of a much puffed article, the real value of which has been proved by those excellent friends of the farmer, Profs. S. W. Johnson and E. Pugh, to be hardly one-third of the price at which it is sold.

The farmers of New England, as well as others, are under obligations to Dr. Pugh, for his recent exposure of the frauds which have been practiced upon them by the sale of such worthless trash as Prof. Johnson had previously shown the article under notice to be. That the obligations of farmers to these two gentlemen are as great as has been just stated, will appear quite evident, we think, from the following quotation from an article by Dr. Pugh, which has been extensively copied into or noticed by our best agricultural journals. He says, after stating that the article referred to (advertised as a superphosphate) contained but little valuable material, and a great deal of worthless matter, which would very materially increase its cost to the farmer, by increasing the cost of transportation,—“The manufacture and sale of such a manure, at such a price, implies either gross ignorance or dishonesty, and points out the necessity of our having some means of protecting the farmer from the shameful imposition that sales of such manures inflict. The sale of every 100 tons of such a manure annually would imply a loss of at least \$3500 per year to the farmers, to say nothing of the still greater loss of crops, resulting from the use of such a worthless manure. Just such worthless manures as this flooded the English market a few years ago, but they have been driven out by the agricultural chemists of that country. Nothing would be easier than to drive them out of the American market, if farmers would insist that manufacturers should sell manures at prices regulated by analysis, and if there were suitable penalties attached to the fraud of not giving as good an article as the analysis called for. . . . The farmer might more effectually be protected from the frauds and ignorance of manure-venders by the employment of State chemists in each State, whose duty it should be not only to watch the manure market, but to make themselves acquainted with all the manurial resources of the State.” The expense of employing a State chemist, and supplying him with the auxiliaries for experimental, agricultural and scientific researches, would, according to Dr. Pugh, be only a fraction of what would be saved to the farmers by the protection thus afforded them against worthless manures and wicked imposters.

MORE ANON.

AMONG the other curious instruments, exhibited in the Philosophical Instrument Department in the London Great Exhibition, is a machine for microscopic writing. With this machine it is stated that the words “Matthew Marshall, Bank of England,” can be written in the two and a half millionth of an inch in length; and it is actually said that calculations made on this data show, that the whole Bible can be written twenty-two times in the space of a square inch. The words to be written microscopically are written in pencil, in ordinary characters, on a sheet of paper at the bottom of the instrument. But the pencil with which this is done, communicates by a series of

levers and gimbals with another minute pencil and table at the top, by means of which the ordinary writing of the pencil and the microscopic writing both move in unison, though the motion of the latter is so graduated that a stroke of a quarter of an inch at the bottom is only a stroke of a millionth of an inch at the top, the shape and character of both marks being nevertheless precisely alike in outline. As a matter of course, the microscopic writing at the top is only visible under powerful magnifiers, and the object of the machine is to mark bank notes with certain minute signatures for the prevention of forgery.

INFLUENCE OF SLEEP OVER DISEASE.

Some of our older practitioners, especially in the country, have been in the habit of having patients awakened every ten or fifteen minutes. This we regard as entirely wrong, and calculated but to increase the nervous irritability, intensify disease, and prolong the recovery. In Dr. Ware's tenth lecture on General Therapeutics, published in the *Boston Medical and Surgical Journal* for January 16th, a few remarks are made that have a bearing upon the point under consideration. He says:

"In all forms and conditions of disease, both acute and chronic, the state of the patient as to sleep, is an important consideration, both as regards his comfort, and also as regards the satisfactory progress of his case. The nature of this condition of animal life we do not fully understand; we only know that it is a necessary one, and having a vast influence on the state of the system. Its purpose seems to be to afford an opportunity, by the suspension of certain activities of the system which require the exhaustion of those powers that emanate from the nervous system, for the reinforcement of those powers. It is also during sleep that the repair of the tissues by nutrition is provided for. Not that all nutrition is suspended during our waking hours, or that all waste is suspended during sleep; but that in the two states of sleeping and waking there is respectively a large predominance of the repair and the waste. Sleep is not merely rest, as it has been sometimes considered, an entire rest of all the organs at once; it is something specifically different. It is a condition of an entirely different nature, and a condition for which rest is not, in any sense, a substitute. The mere fact of existence, without exercise, without fatigue—the simple going on of life—implies a certain expenditure of force, which renders necessary, at certain intervals, a suspension of those functions of the brain and nervous system which are subservient to the phenomena of mind. It is possible that ordinary rest might afford an opportunity for the nutrition of all these tissues, except those which are the agents of the mind. But it seems to be necessary, for the repair of these, that the functions of the mind should also be suspended. Of the physical condition of the brain in sleep, and also concerning the peculiar state of the mind in sleep, notwithstanding the many theories which have been formed concerning them, we know nothing with certainty; and this is not necessary to the practical management of the sick. What should guide us, is the knowledge that a certain amount of sleep, at proper intervals, is an absolute necessity; and that its absence

or its deficiency is always a great evil, and to be prevented by every possible means. In acute diseases, a sufficient amount of quiet sleep is at once a favorable indication of the nature and issue of a case, and also is an important agent in the promotion of a favorable issue. Its absence, on the contrary, is, *pro tanto*, an unfavorable indication as to the result, and also promotes an unfavorable issue. Want of sleep adds to the sufferings of the patient, and also to his exhaustion, and consequently interferes with the success of the sanitary process, and impairs the power of recovery. In every point of view, then, the state of the patient in this respect becomes the object of special attention. Salutary changes in the condition of a patient will be often found to take place during sleep, and to manifest themselves most obviously on awaking from that which has been sound and refreshing."

Dr. Ware makes another practical remark that we know it would oftentimes be prudent to put in practice, and yet we have reason to believe it is seldom thought of by the physician, or urged upon the attention of the patient.

"It sometimes happens that, after a short nap on first going to bed, a person awakens without any known cause, and then remains obstinately watchful for many hours. In this case, if he rises, washes his face, hands and feet, and walks about briskly for awhile, and returns to bed, the charm may be broken, and a continued sleep will ensue. Or he may rise, and write or read with the same result.—*Medical Reporter of Boston.*

POULTRY HOUSES.

Properly constructed poultry houses should have a south-east aspect, sheltered by plantations or walls from the north and west, and the yards furnished with sheds and shrubs to shelter them from the mid-day sun or harsh winds; it should be constructed so as to give as much warmth as possible, but ventilation perfectly maintained. The floor should be elevated and perfectly dry; if boarded, so much the better. Walls and roofs air-tight; the windows should be placed so as to command a thorough draft in the day time in hot weather, but one should be closed at night, as a thorough draft when asleep is very injurious to them; those windows should be covered with wire lattice, to prevent the fowl getting in and out at pleasure. A lean-to roof is generally best, and the perches should rise from the floor, the first, eighteen inches from the ground and one foot apart, each perch rising a foot above the other; nests are made at each end, built of lime and brick.—*Irish Farmer's Gazette.*

For the New England Farmer.

ERRATA.

MR. EDITOR:—Please allow me the privilege of correcting in the columns of the *N. E. Farmer* a mistake that occurred in the printing of my Essay "On the Utility of Birds," in the Essex County Transactions, which was copied into the "Agriculture of Massachusetts," 1862, for 1861. On page 62 of the Essay printed in this Report, is the following passage: "The far-sightedness of the robin is equally remarkable in the *blackbird*, who, though he takes a large portion of his food from

the ground, always discovers it while perched on a tree or a fence, and darts down upon it from his perch." In my manuscript, this remark was made of the *bluebird*, and is entirely incorrect as applied to the *blackbird*.

Yours, truly,

WILSON FLAGG.

LADIES' DEPARTMENT.

EUGENIE'S PETTICOAT.

The Empress has just adopted a new style of petticoat, which is the despair of nearly all the women of moderate fortune who are ambitious of bearing on their persons the latest novelty that is to be found at the celebrated *modistes'* of Paris. Her imperial majesty is not ambitious to popularize the *agreements* of the toilette. She detests everything that is common, and lately begged of her tirewoman to invent something in the shape of a petticoat that could not be worn by every *bourgeois*. That marvellous garment has at last been brought out. It does not altogether supersede crinoline, but greatly circumscribes it, and its peculiar virtue is, that, get it up in the cheapest manner, it must be as dear as seven or eight ordinary petticoats, and cannot possibly be washed and smoothed for less than as many francs. Petticoats are a very sacred subject, and in any case difficult things to treat of; but the *jupon Eugenie*—that is a subject of serious disquietude to so many women—is particularly so. Nevertheless, as it is destined to limit that terrible bore—crinoline—to try and make public its peculiarities is a task that should be attempted. Beneath a ball dress, it produces an effect so charming as to call forth a torrent of the most flattering adjectives of which the French are capable. It certainly forms a graceful contrast, when its wearer dances, to the light skirts of some other lady, coming in contact with the stiff steel bars of the cage she carries about her. This wonderful petticoat is said in most instances to be made of cambric muslin, so that washer-women cannot stiffen it too much. Its circumference is six yards at the widest point, and it is covered by nine flounces of still greater circumference. The lowest of these flounces is by all accounts a mere frill; the second, a few inches longer, and considerably wider, completely covers the first; the third does the same to the second, and so on, till one great flounce falls completely over the other eight, each one of which, to arrive at the standard of imperial elegance, must be hem-stitched like a lady's pocket-handkerchief, and the outer one in addition be nearly covered with the embroidery done by the women of the Vosges. This invention also sets its face against the sewing-machine, as nearly every part of it must be hand-work. It was purposely so designed to prevent an immense number of seamstresses being suddenly thrown out of work by the increased demand for machine-sewing, which is not yet capable of effecting hem-stitching, or embroidery. The Empress's new petticoat is thus calculated to be at the same time a very exclusive institution, and one that will give as much employment to the poor needle-women as the new streets and boulevards do to the blouses.—*London Herald*.

ABOUT STRAWBERRIES,

TO PRESERVE STRAWBERRIES.

To two pounds of fine large strawberries, add two pounds of powdered sugar, and put them in a preserving kettle, over a slow fire, till the sugar is melted; then boil them precisely twenty minutes, as fast as possible; have ready a number of *small* jars, and put the fruit in boiling hot. Cork and seal the jars immediately, and keep them through the summer in a cold, dry cellar. The jars must be heated before the hot fruit is poured in, otherwise they will break.

TO PRESERVE STRAWBERRIES OR RASPBERRIES, FOR CREAMS OR ICES, WITHOUT BOILING.

Let the fruit be gathered in the middle of a warm day, in very dry weather; strip it from the stalks directly, weigh it, turn it into a bowl or deep pan, and bruise it gently; mix with an equal weight of fine, dry sifted sugar, and put it immediately into small wide-necked bottles; cork these firmly without delay, and tie bladders over the tops. Keep them in a cool place, or the fruit will ferment. The mixture should be stirred softly, and only just sufficiently to blend the sugar and the fruit. The bottles must be perfectly dry, and the bladders, after having been cleaned in the usual way, and allowed to become nearly so, should be moistened with a little spirit on the side which is to be next the cork.

STRAWBERRIES STEWED FOR TARTS.

Make a syrup of one pound of sugar and a tea-cup of water; add a little white of eggs; let it boil, and skim it until only a foam rises; then put in a quart of berries free from stems and hulls; let them boil till they look clear, and the syrup is quite thick. Finish with fine puff paste.

STRAWBERRY JELLY.

Express the juice from the fruit through a cloth, strain it clear, weigh and stir to it an equal proportion of the finest sugar dried and reduced to powder; when this is dissolved, place the preserving pan over a very clear fire, and stir the jelly often until it boils; clear it carefully from scum, and boil it quickly from fifteen to twenty-five minutes. This receipt is for a moderate quantity of the preserve; a very small portion will require much less time.

HOME COURTESIES.

In the home intercourse it should be remembered that each one has his place and his part. A happy and pleasant home is an impossibility where any one slights his duty. Home is not a place where you are to cosset your own fancies, or be entertained by the rest. You have no right to sit down, listless and dull, and say, "Come, amuse me and see how pleasant you can make home." You have no right to complain that home is ungenial, till you are sure that you have tried your best to make it genial. The men who complain of homes are mostly those of whom the homes complain, men whose dignity is offended at the bare suggestion that they have something to do toward making it pleasant. Home is not a mere place of entertainment, a sort of tavern, and he who turns to it for entertainment merely deserves

to be disappointed. Hast thou nothing to do, O man! but to throw thyself upon a sofa, or monopolize the easiest chair, and, holding back all thine own information, demand that wife and children amuse thee? or wilt thou go moodily out to club or store, declaring that thou wilt not stay where so little is done for thee? And shall the young man say, "My sisters do nothing to make home pleasant to me," when he has done nothing to make home pleasant to them? I do not think the different members of a home realize how much the pleasant, profitable intercourse of home depends on each, or how hard it is when one and another hang back for the rest to supply the deficiency.—*Rev. J. F. W. Ware.*

COAL OIL is said to be a sure destroyer of bed-bugs. Apply plentifully with a small brush or feather to the places where they most do congregate. The cure is effectual and permanent. Gilt frames, chandeliers, &c., rubbed slightly over with coal oil, will not be disturbed by flies.

YOUTH'S DEPARTMENT.

PRINCIPLE OF THE STEREOSCOPE.

It is generally known that, by means of the stereoscope, the idea of solidity is given to the eye from pictures on flat surfaces. The principle upon which this instrument depends, so as to produce the effect in question, is thus explicable. When a house or a landscape is looked at, it is found to possess a quality which no copy on a flat surface by the best artist can produce; this is solidity or distance, the appearance of objects standing immediately behind each other. In using the term solidity it should be borne in mind that distance is the same thing, since solids are made up of the relative distances of parts of a single object. In perceiving this quality, the eye separately receives a picture of the same objects, the one picture being a little different in perspective from the other, in consequence of the difference in the relative position of the two eyes. One eye, in fact, sees a little more round one side of an object, while the other sees a little more round the other side; and it is the combination of these two pictures by the faculty of sight that gives to objects their solid appearance. Now, in order to obtain the same effect from a picture, the stereoscope is so arranged that two representations of the same object, the one slightly differing from the other in perspective, are placed at the bottom of a small box, where an opening is made, through which they are illuminated. At the upper part of the box are two small eye-pieces, adapted one for each of the observer's eyes. Through these he looks at the pictures, and the appearance of solidity is received in a very remarkable manner. It was found very difficult to draw pictures with sufficient accuracy to give good stereoscopic views since a slight error in perspective would, to a certain extent, vitiate the resulting impression on the eye. But the photographic art supplied this want, for by taking two pictures with the camera, first in the position of one eye and then removed to a little distance to that of the other this result is perfectly obtained, without any risk of error.

THE MAY QUEEN.

Little Bessie awoke one morning,
And drowsily opening her eyes,
She hastily threw back the shutters,
To take a short peep at the skies.
But sad disappointment awaited
The expectant Queen of the May,
For the sky was so black and so lowering,
She knew 'twas a rainy day.

No sooner did Bessie discover
The prospect so gloomy without,
Than, throwing herself on the pillow,
She began the day in a pout.
Soon the breakfast bell tinkled to call her
To join the kind circle below,
But she scarcely heeded its summons,
So wrapped up was she in her woe.

For she and her schoolmates so joyous,
Had long been awaiting the day
When the buds, unfolding in beauty,
Should crown her the Queen of May.
And now they had found that the forest
Was arrayed in most beautiful green;
So, with hearts overflowing in gladness,
They erected a throne for their Queen.

They had planted the May-pole so stately,
And twined it with leaves and wild flowers,
They had said—"Round this let us circle,
And dance through the soft morning hours."
'Twas sad thus to lose all their pleasure—
Have their plans all spoilt by the rain;
But, sadder by far that Queen Bessie
Should her sorrow so poorly restrain.

But not long did she nurse her repining
At the desolate scene out of doors,
For she knew that the raindrops descending,
Would brighten and cheer up the flowers.
A week from that Saturday morning
Was Bessie crowned Queen of the May,
And the woods were more fresh and more charming,
Because of that one rainy day. *Little Pilgrim.*

KEEPING A DIARY.

If a man keeps no diary, the path crumbles away behind him as his feet leave it; and days gone by are but little more than a blank, broken by a few distorted shadows. His life is all confined within the limits of to-day. Who does not know how imperfect a thing memory is? It not merely forgets; it misleads. Things in memory do not merely fade away, preserving as they fade, their own lineaments so long as they can be seen; they change their aspect, they change their place, they turn to something quite different from the fact. In the picture of the past, which memory, unaided by any written record, sets before us, the perspective is entirely wrong. How capriciously some events seem, quite recent, which the diary shows are really far away; and how unaccountably many things look far away, which in truth, are not left many weeks behind us! A man might almost as well not have lived at all, as entirely to forget that he has lived, and entirely forget what he did on those departed days. But I think that almost every person would feel a great interest in looking back, day by day, upon what he did and thought upon that day twelvemonths, that day three or five years. The trouble of writing the diary is very small. A few lines, a few words, written at the time, suffice, when you look at

them, to bring all (what the Yankees call) the surroundings of that season before you. Many little things come up again, which you know quite well you never would have thought of again, but for your glance at those words, and still which you feel you would be sorry to have forgotten. There must be a richness about the life of a person who keeps a diary, unknown to other men. And a million more little links and ties must bind him to the members of his family circle, and to all among whom he lives. Life, to him, looking back, is not a bare line, stringing together his personal identity; it is surrounded, intertwined, entangled with thousands and thousands of slight incidents, which give it beauty, kindliness, reality. Some folks' life is like an oak walking-stick, straight and varnished; useful, but hard and bare. Other men's life (and such may yours and mine, kindly reader, ever be,) is like that oak when it was not a stick, but a branch, and waved, leaf-enveloped, and with lots of little twigs growing out of it, upon the summer tree, and yet more precious than the power of the diary to call up again a host of little circumstances and facts, is its power to bring back the indescribable, but keenly-felt atmosphere of those departed days. The old time comes over you. It is not merely a collection, an aggregate of facts, that comes back; it is something far more excellent than that—it is the soul of days long ago; it is the clear Auld lang-syne itself! The perfume of hawthorn hedges is there; the breath of breezes that fanned our gray hair when it made sunny curls, often smoothed down by the hands that are gone; the sunshine on the grass where these old fingers made daisy-chains; and snatches of music, compared with which anything you hear at the opera, is extremely poor. Therefore, keep your diary, my friend.—*London Magazine.*

THE FIFTH COMMANDMENT—A BOY'S ANSWER.—An old schoolmaster said one day to a minister, who had come to examine the school, "I believe the children know the Catechism word for word." But do they understand it? that is the question," said the minister. The schoolmaster only bowed respectfully, and the examination began. A little boy had repeated the fifth commandment, "Honor thy father and thy mother," and he was desired to explain it. Instead of trying to do so, the little boy, with his face covered with blushes, said, almost in a whisper, "Yesterday I showed some strange gentlemen over the mountain. The sharp stones cut my feet, and the gentlemen saw they were bleeding, and they gave me some money to buy me shoes. I gave it to my mother, for she had no shoes either, and I thought I could go barefooted better than she could."

THE CATTLE MARKETS FOR JUNE.

The following is a summary of the reports for the four weeks ending June 19, 1862:

NUMBER AT MARKET.

	Cattle.	Sheep.	Veals.	Stotes.	Fat Hogs.
May 29.....	1037	2673	300	1942	400
June 5.....	1140	3021	400	1400	500
June 12.....	1134	2593	700	2200	1400
June 19.....	1431	3109	500	1000	1500
	4792	11,396	1900	6342	3800

There have also been at market some 2500 young pigs.

PRICES.

	May 29.	June 5.	June 12.	June 19.
Beef cattle, $\frac{1}{2}$ lb.....	5 $\frac{1}{2}$ a 7	5 $\frac{1}{2}$ a 7	6 a 7 $\frac{1}{2}$	5 $\frac{1}{2}$ a 7
Sheep, wool on, live wt.....	5 a 6	5 a 6	5 a 6	5 a 6
Sheep, clipped, live wt.....	4 a 4 $\frac{1}{2}$	4 a 4 $\frac{1}{2}$	4 a 4 $\frac{1}{2}$	3 $\frac{1}{2}$ a 4 $\frac{1}{2}$
Swine, stores, wholesale.....	3 $\frac{1}{2}$ a 5	3 $\frac{1}{2}$ a 5 $\frac{1}{2}$	3 a 4 $\frac{1}{2}$	3 $\frac{1}{2}$ a 4 $\frac{1}{2}$
" " retail.....	5 a 6 $\frac{1}{2}$	4 $\frac{1}{2}$ a 6	4 $\frac{1}{2}$ a 6	4 $\frac{1}{2}$ a 6
Spring pigs.....	11 a 12 $\frac{1}{2}$	8 a 11	6 $\frac{1}{2}$ a 9	7 a 8 $\frac{1}{2}$
Live fat hogs.....	3 $\frac{1}{2}$ a 4 $\frac{1}{2}$	3 $\frac{1}{2}$ a 4 $\frac{1}{2}$	3 $\frac{1}{2}$ a 4	3 $\frac{1}{2}$ a 3 $\frac{1}{2}$
Dressed hogs.....	5 a 5 $\frac{1}{2}$	6 a 5 $\frac{1}{2}$	4 $\frac{1}{2}$ a 5 $\frac{1}{2}$	4 $\frac{1}{2}$ a 5
Veal calves, each.....	\$3 a 6	\$3 a 6	\$4 a 6	\$4 a 6

REMARKS.—Of the whole number of cattle above reported, 3212 were from the West, mostly from Illinois, while only 1580 were from the North. Of the 11,396 sheep, 1776 were from the West, and 9620 from the North. From which it appears that during these four weeks the Western farmers have furnished the great cattle market of New England with about two-thirds of all the beeves on sale, and something like one-sixth of the whole number of sheep. The average quality of beeves has been good.

Up to June 12, there was but little change in the price of beef, although a gradual improvement might have been perceptible, but at that time there was an advance of full $\frac{1}{2}$ c $\frac{1}{2}$ lb. in prices, and something probably in the allowance for shrinkage, so that the market for that week may be considered as the best for the season, perhaps for the year. A larger supply the next week brought prices back again, so that at the close of the four weeks they are very nearly the same as at the beginning.

The sheep market has been very quiet during the last month, the supply being just about equal to the demand. Lambs have gradually declined in prices. The quality of old sheep was hardly as good the last week as the first, but there has been but little change in prices.

RELATIVE VALUE OF SUBSTANCES FOR PRODUCING MILK.—Several French and German chemists estimate the relative value of several kinds of food for milch cows according to the following table:

That 100 pounds of good hay are worth—	
200 pounds potatoes.	
460 " beetroot, with the leaves.	
350 " Siberian cabbage.	
250 " beetroot, without the leaves.	
250 " carrots.	
80 " hay, clover, Spanish trefoil or vetches.	
50 " oil-cake, or colza.	
250 " pea straw and vetches.	
300 " barley or oat straw.	
400 " rye or wheat straw.	
25 " peas, beans, or vetch-seed.	
50 " oats.	



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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NOURSE, EATON & TOLMAN, PROPRIETORS.
OFFICE...100 WASHINGTON STREET.

SIMON BROWN EDITOR.
HENRY F. FRENCH, ASSOCIATE EDITOR.

CALENDAR FOR AUGUST.

AUGUST! Reign, thou Fire-Month! What canst thou do?—Neither shalt thou destroy the earth, whom frost and ice could not destroy. The vines droop, the trees stagger, the broad-palmed leaves give thee their moisture, and hang down. But every night the dew pities them. Yet, there are that look thee in the eye, fierce Sun, all day long, and wink not. This is the rejoicing month for joyful insects. If our unselfish-eye would behold it, it is the most populous and the happiest month. The herds plash in the sedge; fish seek the deeper pools; forest-fowl lead out their young; the air is resonant of insect orchestras, each one carrying his part in Nature's grand harmony. August, thou art the ripeness of the year! Thou art the glowing centre of the circle!—*H. W. Beecher.*



A

MERICA was long ago characterised by some European naturalist, as the "land of insects." Warmed into existence by the excessive heat of the season, a heat that gives us a pretty fair experience of the climate of countries much

nearer the equator, insects swarm around us, by day and by night, in-doors and out, in earth, air and water, in such countless numbers that, perhaps, AUGUST, sultry, dog-day August, may, with some propriety, be denominated *The Month of Insects*. Plagues of Egypt! How they do bother. It was by a miracle, we are told, that "a grievous swarm of flies" once entered the royal dwelling of the hard-hearted Pharaoh, but in this our "land of insects," it would be regarded a miracle, indeed, were our houses exempted from such annoyance for a single week, in the month of August. But flies are, by no means, the most troublesome of this class of our household pests.

In many sections of our country, no pantry can be made tight enough to exclude those extremely "little ants" which infest some premises, in such multitudes as to seem a veritable repetition of that other "wonder in Egypt," by which "all the dust of the land became lice." Troublesome, however, as all these may be to the tidy housewife, they are quite insignificant when compared with the myriads which people our fields, and in so many ways prove themselves to be "injurious to vegetation."

From what we have read and heard about the insects of Europe, we have always understood that farmers there, much as they complain of their losses by the depredations of various kinds of insects on their crops, suffer much less from this cause than we do here. This fact is very strongly stated by Dr. FITCH, Entomologist of the New York State Agricultural Society. In a recent address he remarked that "the losses which we sustain from these pests immeasurably surpass anything of the kind to which they are subject in Europe. There, if an insect appears in their wheat fields by which the crop is shortened an eighth or a tenth from its average yield, whole communities become alarmed, while here so slight a loss would be disregarded and would pass wholly unnoticed." It may, therefore, be assumed as probably true, that there is something in our dry atmosphere, hot summers, loose soils, or some other peculiarity of our country, which is so favorable to the increase and activity of this most numerous branch of the animal kingdom, as to afford some ground of justification for the assertion that *America is the land of insects*. At any rate, we find multitudes of them cutting off the young shoots of our vegetables as they come up in the spring; other multitudes eat the leaves from garden plants and vines, destroy our cherries, currants, plums, apples and pears, utterly ruin whole fields of wheat and other grain, or saw away at the solid trunks and limbs of trees, designed for fencing, fuel, building purposes, and for our furniture, until

—"perforated sore,
And drilled in holes, the solid wood is found,
By worms voracious, eaten through and through."

It is, also, we believe, generally supposed that the losses which the farmers of our country sustain from insect depredations are constantly increasing. This is certainly true of some insects. The curculio, for instance, which a few years ago confined its operations to plums, has now become so numerous as to be able to find almost every apple on every tree of many large orchards, and to mark them unmistakably "for their heirs and successors."

Some farmers, when they consider how numerous, how minute, and yet how powerful are the foes which assail them, and then remember how little they can do to protect their crops when attacked by insects, are ready to give up all hope, and sit down in despair. This is cowardly. "Dominion over everything that creepeth upon the earth" was given to man in the beginning, and we have no doubt will be retained unto the end. It is possible that we shall be obliged to understand their habits and the history of their lives better than we now do. The study of Natural History may become a necessity to success in the contest with insects in America. And in this study, perhaps unexpectedly, we may find some compensation for our losses, in learning that even insects are but links in the great chain of universal goodness which unites the creatures of our common Father.

To show how well the humanizing effect of the study of nature was understood by one remarkable reformer, we give the story of an American entomologist—that Peter the Great, of Russia, conceived the idea that the study of Nature would contribute much towards the civilization and refinement of his barbarian subjects, and, accordingly, he established, at an enormous expense, a large Museum of Natural History at St. Petersburg; and in order to induce his whiskey-loving subjects to go there, he ordered a glass of brandy to be presented to every visitor!

May the direct appeal which insects make to our purses, prove at least as efficient, in promoting a more intimate acquaintance with their history and habits, as did the Czar's toddy.

ABORTION OR "SLINKING" IN COWS PRODUCED BY SMUT ON CORN.—The *Belgian Annals of Veterinary Medicine* states that the *Ustilago Madis*, or parasitic mushroom, which occurs on maize or Indian corn, as ergot does on rye, produces abortion in cows fed with it. In a stable where cows were given corn with smut on it, eleven abortions occurred in eight days; when the cause was suspected, and the food changed, there were no abortions. Stock-keepers should make a note of this statement.

FLAX COTTON.

We learn that the Rhode Island Agricultural Society has sent to Washington a memorial to be laid before Congress, asking for an appropriation to enable the society to prosecute its experiments in the manufacture of flax cotton. Those who have given most attention to the subject are confident that the difficulties in the way of manufacturing flax can be overcome, and that with such facilities as the appropriation they desire would furnish, some of our ingenious men would very soon accomplish the object which has been so long sought.

It may at first sight seem strange to some that this matter should be now engaging the attention of the society. But when justly viewed, it is seen to have the most intimate connection with our public affairs. For the want of cotton our mills must soon stop. Many of them have already stopped. How long they will remain idle, unless some new material to take the place of cotton is discovered, no one can say. And when the productiveness of our mills is at an end, the "internal tax" on cotton manufactures becomes nothing. If a substitute for cotton is found, our mills may continue their labors and pour in their quota to the national treasury. New England and the Middle States are of course peculiarly interested in seeing the invention perfected for which the society is laboring.

But there is of course a much wider view of the question, one which we have so often presented that we need not enlarge more upon it now, but which every day becomes more and more worthy of consideration. The invention of machinery for spinning flax satisfactorily and cheaply would at once depose and overwhelm King Cotton, whose throne has been so essentially shaken this past year. The effect upon the proud and rebellious temper of the cotton-growing South, upon the fate of slavery, and so upon the prosperity of our country is manifest. These facts explain the persistence with which the intelligent and far-sighted members of the Rhode Island Society are endeavoring to complete the experiments requisite for success in the manufacture of flax cotton.—*Providence Journal*.

CLEARING A DEBTOR'S PRISON.—The work of clearing the Queen's Bench Prison, London, of its inhabitants is now verging toward a close. Strange to say, it has been a very difficult task. Many of the prisoners sternly refused to be made bankrupts, though, by giving their consent, they could have immediately obtained their release. The most curious case was that of Wm. Miller, who had been in prison since July, 1814—forty-eight years! He had lost all desire to go out, and would sign nothing which would have the effect of making him a free man. When at last he was absolutely forced to acquiesce, he begged to be allowed to remain in the prison a few days longer; and when his time was up he still lingered fondly within the gates to bid the officials farewell, and to shake hands over and over again. Until he passed the outer gates of the Queen's Bench Prison, a few weeks since, Wm. Miller, who was born nearly eighty years ago, never saw a street gas-lamp, nor an omnibus, much less a steamship or a railway.—*Railway Exchange*.

For the New England Farmer.

ON THE KEEPING PROPERTIES OF EGGS.

MR. BROWN:—Having read occasionally some controversy in the *N. E. Farmer* concerning the keeping properties of productive eggs, or those containing a germ, compared with unproductive eggs, which are unimpregnated, I wish to communicate a few observations on the subject. Persons who have been accustomed to raising fowls, must have observed that, if there are several eggs left in the nest of a hen, after she has hatched her brood, in frequent instances, some of these remaining eggs, when broken, appear to be fresh and uninjured, while others are entirely rotten, or contain dead chickens. Now those eggs which have not been materially injured by the warmth of the hen's body during the period of incubation, are such as never contained a germ; and those which are rotten, are eggs that contained a germ that had perished. I have always, therefore, made it a practice to examine the eggs in the nest of a setting hen, after she has sat upon them five days, and take away all those in which the process of incubation has not commenced. This is easily determined by holding the eggs against a strong light, which makes apparent the little net work of blood vessels forming within all the productive eggs, and reveals the clear transparency of the unproductive ones. By this means I save all the eggs which are not going to produce chickens, before they have been injured by the warmth of the hen; if I left them a longer time, those eggs which contained a perished germ, would soon become corrupted, though the eggs that never contained a germ would bear this temperature with impunity for several weeks.

But as the public is always better satisfied if an individual who makes a doubtful assertion, should establish it by the testimony of some high authority, as well as by his own experience, I have made an abstract of some remarks on this subject, contained in a work "On Domestic Fowls, &c.," by M. De Reaumur, the inventor of the French thermometer. In this abstract I shall use the language of the author, as translated, but shall considerably abridge the sum of his remarks.

The multiplication of chickens does not appear, says M. De Reaumur, to be a more important object than the preservation of eggs, since it is probable that hens contribute more to the actual supply of man's food by the latter, than the former. It is very easy to surmise that if all the eggs consumed in one year were put into the scale of a balance and weighed, and all the chickens, fowls and capons eaten in the same year were weighed likewise, the weight of the eggs would be superior to that of the flesh of the poultry. He thinks, in any case, however, that the preservation of eggs is a subject of great importance.

There is a method, he continues, for having eggs preserved a great while without corruption, which ought to obtain public attention. It is very remarkable that there should be, among eggs laid by the same hens, some that remain sound and contract no ill taste whatever, though laid a great while before, and kept in a warm, dry air five or six times longer than what would be necessary to rot any other eggs, placed in the same circumstances. This is an observation which he had oc-

casional to make a great many times, before he tried methods for causing chickens to be hatched in ovens. After eggs had been warmed for some days together in the hatching ovens, there were some that spread the most offensive smell in the place if they were broken, and were entirely rotten. There were others in the same place, which, when broken, not only had no ill smell, but which were very good to eat. They differed from new-laid eggs only in having some of their moisture evaporated, but the yolk was an entire ball, like that of fresh eggs.

In some of the eggs that were corrupt enough to spread the most offensive smell, he found a chicken very well formed; in some of the same eggs he found only the remains of one, and in others he could not perceive the least vestiges of any. In this last case the germ had probably perished at an early date, and had become dissolved; but the uncorrupt eggs never contained a germ. The germ, at least a productive germ, is wanting in the eggs of hens that live without a cock; and those of hens that are not deprived of cocks are not all fruitful. Now, since the eggs that have germs in them are liable to corruption, he was led to think that those which keep sound a longer time, are the unfruitful ones. The experiments necessary to remove all doubt on this point were too plain not to be attempted.

He accordingly kept four hens without a cock in a large cage, where they had every thing besides in plenty; they laid eggs there, the first of which were of course productive; but after these had all been laid, by experimenting upon those which were laid afterwards, he found that when placed in the hatching oven, no chicken was engendered in them, and they did not contract any corruption. *Although they were in an air warm to the degree that causes chickens to be hatched, they remained sound there for above thirty days, and sometimes forty or fifty days together.*

Thirty or forty days in an air of the heat of a hen's body must be equivalent in its action upon the eggs, to a great many months of an air which has only the common temperature of our houses. He concluded, therefore, that eggs destitute of a germ might be kept a long time in an ordinary temperature without being spoiled. He then made further experiments of another character. He deposited some of these eggs laid by hens kept apart from cocks, in one of the coolest places in his house on the ground floor, after having written upon each of them the date when it was laid. On the third day of January, he tried those which had been deposited there on the first of May, the preceding year; and found them in good condition. A great cavity had been made within them by evaporation. They were not in the least corrupt, though the yolk was slightly adhering to the shell. He had these eggs dressed in different ways, and none of those who eat them, had the least suspicion that they were eight months old.

In order, then, to have eggs that would keep fresh from spring to the middle, or even the end of winter, we need only to deprive hens of all communication with cocks. People, without knowing this, must have owed to this circumstance the occasional advantage of finding a smaller number of spoiled eggs among those they bought. Hens are not furnished in every farm with as many and as good cocks as would be necessary to render all

their eggs fit to be sat on; and the eggs of such fowls, after being kept a long time, would contain a large proportion well preserved.

Reaumur quotes some experiments of other persons which were attended with similar results. I think, therefore, we have reason to believe that the eggs which are laid by hens kept entirely apart from the male bird, are not liable to corrupt, under ordinary circumstances, before the contents are almost entirely evaporated. Eggs, on the other hand, which contain a germ, will begin to corrupt immediately after the germ has perished; and the germ seldom retains its vitality more than seven or eight weeks, unless some extraordinary attention is paid to the eggs for their preservation. Indeed, I have no doubt that if a series of careful experiments were performed with the two different kinds of eggs, to ascertain their comparative keeping properties, it would prove that the unimpregnated eggs laid in the spring, would be found as good in January as other eggs laid at the same time, would be in September. But this is conjecture: the exact difference between their keeping properties can only be ascertained by further experiment.

WILSON FLAGG.

UNITED STATES AGRICULTURAL DEPARTMENT.

This is the act establishing a National Agricultural Department at Washington. The Commissioner has not yet been appointed:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there is hereby established at the seat of Government of the United States a Department of Agriculture, the general designs and duties of which shall be to acquire and diffuse among the people of the United States useful information on subjects connected with Agriculture, in the most general and comprehensive sense of that word, and to procure, propagate and distribute among the people, new and valuable seeds and plants.

SEC. 2. *And be it further enacted,* That there shall be appointed by the President, by and with the advice and consent of the Senate, a "Commissioner of Agriculture," who shall be the chief executive officer of the Department of Agriculture, who shall hold his office by a tenure similar to that of other civil officers appointed by the President, and who shall receive for his compensation a salary of three thousand dollars per annum.

SEC. 3. *And be it further enacted,* That it shall be the duty of the Commissioner of Agriculture to acquire and preserve, in his department, all information concerning Agriculture, which he can obtain by means of books and correspondence, and by practical and scientific experiments (accurate records of which experiments shall be kept in his office,) by the collection of statistics, and by any other appropriate means within his power; to collect, as he may be able, new and valuable seeds and plants; to test, by cultivation, the value of such of them as may require such tests; to propagate such as may be worthy of propagation, and to distribute them among agriculturists. He shall annually make a general report in writing of his acts, to the President and to Congress, in which he may recommend the publications of papers

forming parts of, or accompanying his report, which report also shall contain an account of all moneys received and expended by him. He shall also make special reports on particular subjects, whenever required to do so by the President, or either house of Congress, or when he shall think the subject in his charge requires it. He shall receive and have charge of all the property of the agricultural division of the Patent Office, in the Department of the Interior, including the fixtures and property of the propagating garden. He shall direct and superintend the expenditure of all money appropriated by Congress to the Department, and render accounts thereof, and also of all money heretofore appropriated for Agriculture, and remaining unexpended. And said Commissioner may send and receive, through the mails, free of charge, all communications and other matter pertaining to the business of his department, not exceeding in weight thirty-two ounces.

SEC. 4. *And be it further enacted,* That the Commissioner of Agriculture shall appoint a chief clerk, with a salary of two thousand dollars, who, in all cases, during the necessary absence of the Commissioner, or when the said principal office shall become vacant, shall perform the duties of Commissioner; and he shall appoint such other employees as Congress may from time to time provide, with salaries corresponding to the salaries of similar officers in other Departments of the Government; and he shall, as Congress may from time to time provide, employ other persons, for such time as their services may be needed, including chemists, botanists, entomologists, and other persons skilled in the natural sciences pertaining to Agriculture. And the said Commissioner, and every other person to be appointed in the said Department, shall before he enter upon the duties of his office or appointment, make oath or affirmation truly and faithfully to execute the trust committed to him. And the said Commissioner and the Chief Clerk shall, before entering upon their duties, severally give bonds to the Treasurer of the United States, the former in the sum of ten thousand dollars, and the latter in the sum of five thousand dollars, conditional to render a true and faithful account to him or his successor in office, quarter-yearly accounts of all moneys which shall be by them received by virtue of the said office, with sureties to be approved as sufficient by the Solicitor of the Treasury; which bonds shall be filed in the office of the First Comptroller of the Treasury, to be by him put in suit, upon any breach of the conditions thereof.

Approved May 15, 1862.

THE WORKMANSHIP OF IVORY.

None of our manufacturers have yet reached the consummate skill of the Chinese artists in the workmanship of ivory, chiefly remarkable in their concentric balls, chess pieces and models. Yet the adaptation to useful purposes of this valuable substance is fully understood by those who do not undertake to rival the exquisite minuteness of Eastern art. The manufacturers of surgical instruments are in the habit of rendering ivory flexible for use as tubes, probes, etc., by acting on the well-known fact that, when bones are subjected to the action of hydrochloric acid, the phosphate of lime, which forms one of their component parts,

is extracted, and thus bones retain their original form, and acquire great flexibility. After giving the pieces of ivory their acquired form and polish, they are steeped in acid, either pure or diluted, until they become supple and elastic, and of a slightly yellow color. In the course of drying, the ivory returns to its original hardness, but its flexibility can be easily restored by surrounding it with wet linen. It is now ascertained that the decay of articles in ivory can be effectually checked, even when its progress has advanced so far as to cause the specimens to crumble away under the hands. Some of the works in ivory forwarded by Mr. Layard from Nineveh, were found, on their arrival in England, in a state of rapid decomposition. Professor Owen was consulted on the subject, and he suggested a remedy which, on trial, proved to be in the highest degree successful. Concluding that the decay was owing to the loss of gelatine in the ivory, he recommended that the articles should be boiled in a solution of gelatine, and thus treated, they became firm and solid.

PAINT FOR MARKING LABELS.

1. In the business of the garden and orchard, marked stakes and labels are often needed for temporary purposes, as the designation of rows of fruit trees, new varieties of corn and potatoes, flowers, &c., or rows of seed sown in hot beds.

2. The staves of an old barrel sawed in two and sharpened at one end, answer for larger purposes, and short pieces of hemlock lath, planed smooth on one side, for smaller ones. Those who happen to have blocks of cedar cut off from long posts, or even the sound portion of cedar posts that have failed, will find them especially useful wood for either large or small marks and stakes.

3. For paint to mark such stakes and labels, I have found nothing so cheap and ready as shellac varnish, into which a little lampblack had been worked. Whether used in making letters or figures, it should be applied with a small brush. It is better applied to the naked wood than to a painted surface, to which, especially if the paint be fresh and glossy, it does not adhere well.

Such paint will continue legible until the stakes decay. Its superiority to oil paint is seen in two facts—it dries rapidly, and it does not spread on the wood when first applied, as does oil paint on many surfaces, and become illegible.

So, also, this same mixture is superior for the same reason for marking barrels, boxes and bales of goods.—*Country Gentleman*.

TO CURE A FILM ON THE EYE OF A HORSE.—

Take of white vitriol and rock alum one part—pulverize finely, and add clear spring water. With a finely pointed camel's hair pencil or soft feather, insert a single drop of this solution into the diseased eye every night and morning, and in a week the film usually disappears, and the eye becomes bright, sound and healthy. In some cases, pulverized loaf sugar blown into the eye through a quill, will prove a remedy. Powdered glass should never be used in such cases, although recommended by some, as it is much more likely to produce injurious effects, than to cure them.

A DAY WITH THE SHAKERS.

Harvard, June 20, 1862.

GENTLEMEN:—There is always something profitable to be found here among this interesting and intelligent people. One soon catches the spirit of quiet which pervades everything, and voice, manner and passion are all chastened and calmed, while surrounded by a system that never yields, though it is never irksome or oppressive. On their little farm of *two thousand acres*, always managed so as to yield a profit, I do not fail to find something to learn in an agricultural point of view. A considerable portion of their land is occupied with growing wood, which covers the sweeping vales and beautifully swelling hills around me, almost as far as the eye can reach. In the clear sunlight of this delicious June afternoon, the rich foliage of the forests is trembling and glancing in the sun's rays, and giving tone to the fresh west wind playing in the branches. Cattle are grazing on the distant hill-side pastures, and the new corn plants are glistening on the wide-spread fields of brown soil, where groups of healthy men, clad in loose and comfortable garments, are tending the springing corn. All things seem to be in harmony. Voice answereth unto voice in sympathizing tones. While all nature is fresh with new life and beauty around me, the bursting bud or expanded flower, the young fruit and waving grass or promising grain, all seem in unison with the spirit and expression of the singular and sentient beings with whom I have been conversing. And now come other tones through the orchard, and up the hill into the vineyard, where bees hum, and young grape blossoms fill with fragrance the surrounding air! These voices cannot be the breath of the trees, or birds, or climbing vines. They come mellifluous, in irregular cadences, as the voices of joyous girls, though from this bower I cannot look out upon habitation or human face. And the voices of joyous girls they proved, coming from the school-room, where I joined them, and passed a most interesting hour.

In this school I found fifteen girls, between the ages of fourteen and five—children who came to the society with their parents, or who have been adopted. The room was very commodious, and the perfection of neatness, the furniture comfortable and the walls spread with such maps and diagrams as were necessary for reference. I listened to classes in reading, parsing, spelling, geography, and then to an exercise which was new to me, though somewhat familiar with schools. The teacher asked her pupils to express "what they should like?" when one of the older scholars, in glowing but appropriate language, told through what country she would "like to travel and what to see. The others, apparently taking the hint of their leader, all spoke of travel, and

what they should be happy to witness, even down to the five-year old child, who would like to see the ocean, but not to sail in ships in a storm! She thought she would not like the flowers of the ocean as well as those of the land, as they would be too slimy." Deacon GROVESNOR beckoned to her, and she went and nestled in his lap as confidently and lovingly as the babe clings to the bosom of its mother. There seemed to be but "one heart, one mind, one voice," and I felt as though it were "heaven on earth begun." The teacher seemed to me highly accomplished, not only as a teacher, but in all those graces which adorn woman the most. Her manner and conversation were elegant, without effort, and her sketches, singing, and her affectionate attention to the children in her care, all told of the deep sentiment and loving heart that shone out so conspicuously in her life. It was a model school.

There are four "families" here, as they are called, owning the real estate in common, while the business and pecuniary matters of each family are entirely distinct. There are subdivisions of these families, I believe, where smaller numbers occupy a tenement, but all go to a common table, the women being seated on one side and the men on the other.

They have cleared large tracts of rocky and springy lands, so that they now present smooth surfaces and fine crops. The first process in this reclamation has been drainage, and the next removing the rocks—the latter being used to fill wide and deep excavations made to receive them. They have not yet introduced tiles, and find, so far, that their ample ditches, with the stones resting upon a gravelly bottom, answered all purposes on the lands which they have reclaimed. I visited one drained field of about twenty acres, which was covered with fine crops of clover, roots, sage, &c. An account of the manner of reclaiming this field was written for the *Farmer* by Dea. GROVESNOR, and may be found in our last year's volume. They keep, in all, about one hundred head of cattle. I saw a portion of them, which were a credit to the skill and management of their owners.

A variety of employment is engaged in on the estate—each branch having its special and responsible superintendent. One has charge of the orchards and vineyards, another of the stock and care of the barn, while a third, perhaps, sees to the collection and drying of herbs, which a fourth presses and packs, with such assistance as may be required in his department. I suppose a similar arrangement exists in regard to the field crops and to the articles which they manufacture. I have long enjoyed an acquaintance with several of these persons, and have ever found them upright and intelligent, possessing an urbanity of manner rarely surpassed by those in the most polite circles of life.

Neatness, order and industry are everywhere visible among these people, and when I passed from the workshop or the field to the parlor, and in social converse there tried to learn something of their inner life, all seemed to be real and harmonious. I have never been able to discover the demon discord between their thoughts and their acts. They are cheerful, though serene, often unbending in a quiet facetiousness which shows a decided elasticity of mind. I have noticed this among the women as well as men—perhaps more frequently. I should be glad to speak of individuals, but dare not invade the sanctity of their retirement. One lady informed me that she had been there more than forty years, and never had found the first hour when she regretted her coming, or had a desire to leave! If "contentment with godliness is great gain," surely they must be a happy people, for every indication is an attestation that they are happy. I look upon this association as the soundest *Insurance Company* known to men. It insures not only against fire and flood, but against poverty, sickness and disease—against the loss of home and reputation, and most of the ills that flesh is heir to, and in doing this, it insures long life and a serene old age. In the language of the great Master, it says to all—"Come unto me, all ye that are weary and heavy laden, and I will give you rest." To the young, the middle aged and old—to the afflicted, disappointed, tempted, discouraged and persecuted, it says this:—"Come Home! The conditions are Heaven-given, and simple. Come and earn your bread by the sweat of your brow. Come with coffers full, if you will, but come empty-handed if you have them not, and the mortal body and immortal soul which you bring, shall receive our affectionate nurture and tender care." What need we more?

I am under obligations to Dea. AUGUSTUS H. GROVESNOR, and, indeed, to all, men and women, for the most polite attention to myself, wife, and our companions, Dr. Joseph Reynolds and wife, of Concord.

For the benefit of the inquiring reader who may not have the information before him, I copy one or two paragraphs from the *New American Cyclopædia*, in relation to these interesting people.

"These settlements are composed of from 2 to 8 'families,' or households. A large dwelling-house, divided through the centre by wide halls, and capable of accommodating from 30 to 150 inmates, is erected for each family, the male members occupying one end and the females the other. The societies all possess considerable tracts of land, averaging nearly 7 acres to each member. They believe idleness to be sinful, and hence every member who is able to work, is employed in some labor. They have usually very extensive gardens connected with their settlements, and the culture of flowers, medicinal herbs, fruits and vegetables has been a favorite business with them; garden

and flower-seeds, and the dried herbs and medicinal extracts, fluid and solid, in use by physicians, have been largely produced by them. Of late years they give more attention to agriculture and to manufactures than formerly. * * *

"Their mode of worship is peculiar, as in it they exercise both soul and body. The two sexes are frequently arranged in ranks opposite to and facing each other, the front ranks about 6 feet apart. There is usually an address by one of the elders upon some doctrinal subject, or some practical virtue, after which they sing a hymn; then they form in circles around a band of male and female singers, to the music of whom they 'go forth in the dances of them that make merry,' in which they manifest their religious zeal. * * *

"They believe themselves to be frequently under the immediate influence of spirit agency, both of angels and of the departed members of their own fraternity who have advanced further than those still in the body in the work of the resurrection or redemption from the generative nature and order. They have a ministry, composed of 2 brethren and 2 sisters, who have the oversight of from 1 to 3 or 4 societies; also each family in every society has 4 elders, 2 brethren and 2 sisters, who have charge of the family. The temporalities of each family are cared for by 2 deacons and 2 deaconesses. * * *

"Their increase during the present century has been moderate, only 3 societies having been formed within the last 50 years, and the growth of those previously in existence having been slow; but it is a fact worthy of note, that they are the only people on this continent, if not in the world, who have maintained successfully for more than 70 years a system of living, one of the fundamental principles of which is a community of property."

As a general thing, their crops look well—their grass crops, especially, are better than I have seen elsewhere. Their great barn is a model, at the "Church Family." Water is introduced from a hill-side a mile distant, with a huge reservoir on another hill, and from thence into all their buildings. But I have filled my sheet, and must stop.

Very truly yours, SIMON BROWN.

MESSRS. NOURSE, EATON & TOLMAN.

For the New England Farmer.

FENCES---CROWS.

MR. EDITOR:—My object in the brief note sent you some time since, was to state what was supposed to be a fact that might be of some interest to the public, viz.: that fences built on essentially the same plan of Mr. Smith's patent, were erected in this vicinity several years previous to the date of the said patent.

Since that time, two communications have been published over his name in reference to this matter. Whether he acts the part of a gentleman in insinuating that all who may question his exclusive right to a particular principle in fence building are guilty of "stealing at funerals," and of engaging in piratical pursuits generally, I leave for you and your readers to judge.

Mr. Smith's offer of a right to build the said fence is declined, for two reasons:

1. I do not wish to avail myself of the benefit of

his labors without suitable and proper compensation.

2. I am too well satisfied with fence erected before his patent was obtained, to be under the slightest "temptation" to substitute one that is not essentially better.

Your correspondents "L. R. E." recommends strychnine to protect corn-fields from crows. I think a better preventive is the coating of the seed with tar. It has been tried by many farmers in this place for several years with entire success. The corn should be wet with warm water and stirred with a stick which has been immersed in the tar, until it is completely coated, and then a small quantity of plaster or ashes should be applied, to prevent its sticking. FARMER.

South Amherst, June 16, 1862.

SIMPLE PREVENTIVE OF THE RAVAGES OF MICE.

Mr. Geo. Jaques, in *Hovey's Magazine*, thus alludes to the destruction of trees the past winter by the mice, and a simple means of preventing their ravages:—

"Immense damage has been done to the apple orchards of this country, during the past winter, by mice. This destruction of property is the more to be deplored, since the preventive is so simple and sure. For years the mice have not injured my own trees in the least. My method of defence against them, I regard as infallibly efficacious. Early in November I hoe or spade up around each tree a *cone of earth*, covering the collar of the tree five or ten inches deep, so that there can be *no cavity* under the snow-crust *close to the trunk*. Hence, it is impossible for mice to approach that particular point upon the tree where they perpetrate their mischief. *Never* in one single instance has this preventive disappointed me, and I have practiced it over ten years.

Truly yours,
Worcester, May 15, 1862.

GEO. JAKUES.

REMARKS.—The *cone of earth* to be placed about the trunk of fruit trees will prevent mice from gnawing them under ordinary circumstances,—but when the surface of the ground is covered with ice as it was last winter, and deep snows or drifts surround the trees, the mice come out and run upon the top of the snow and gnaw the trees several feet from the ground. We have seen repeated instances where they had completely excoriated all the branches of a young tree, from their junction with the stem two feet outward. Is there not some safe wash, such as a decoction of aloes, or a wash of tar, that would not injure the tree, and be so unpalatable to the mice as to prevent their feeding upon it? A remedy might be found, perhaps, in scattering about wheat, or other grain that had been impregnated with strychnine. This might be done in autumn after the birds are gone, or during the winter. We are inclined to think that our grass crops are seriously injured—especially the herds grass—by large numbers of mice feeding upon their roots.

For the New England Farmer.

AGRICULTURE IN OUR COMMON SCHOOLS.

MR. EDITOR:—Ought agriculture to be taught in our common schools? In their present state and condition, can it be successfully taught there, without doing more harm than good? I make no apology for presenting this subject to the consideration of your readers. In this communication, I propose to offer a few reasons why agriculture ought not to be introduced, as a study, into our common schools.

Perhaps it is unnecessary to remark at the outset, that our common schools were established for the purpose of teaching reading, writing, spelling and defining of words, grammar, or the use and power of language, arithmetic and geography. These branches have been, and still are taught equally to all without distinction. The children of the rich and the poor, of both sexes, enjoy equal advantages. The design of their education is not to fit them for any particular calling, whether it be that of a farmer, a merchant, a mechanic, or a manufacturer, but, by a thorough training and drilling in the above studies, to prepare them for any occupation or pursuit.

Now, I object to the introduction of agriculture, as a study, into our common schools, because I believe it would have a tendency to divert attention from those primary and fundamental studies which appropriately belong to them, and be a great injury to the schools. Its effect would be to embarrass the interests of agriculture, and to check the progress of the schools. Our common schools are already burdened with too many studies; and they are not in a condition to attend to any new ones. We have already so great a multiplicity of studies in school, that a large proportion of the scholars who receive all their education from this source, are but imperfectly acquainted with the first principles and rudiments of their own language, and make a sorry work in writing English composition, and in the spelling and defining of words. In some of the common branches, we sometimes meet with scholars who are as ignorant as the boy who could cipher, but could not read—who could do any sum in arithmetic, as soon as it was read and explained to him. I want scholars who know how to read, as well as cipher. I want fewer studies, but better scholars, in our common schools.

I object to the introduction of agriculture, as a study, into our common schools, because our teachers have enough else to do, and because they are not qualified to teach it. They have more branches to teach now than they can well attend to; and being unacquainted with the theory and practice of agriculture, they cannot teach the science correctly; nor can they bring forward those ready, but striking illustrations which assist the pupil by securing his attention, and interesting him in the study. To the great neglect of the other and more important studies, the teachers would be obliged to spend much time in the vain attempt to impart instruction on topics which they do not understand themselves, and which they can not impart to others. It is a wise maxim, no lantern can emit more light than it has in it. But, if the lantern be made of tin, with a few small holes in the sides, the light emitted will be very small.

I object to the introduction of agriculture, as a study, into our common schools, because our schools are of a mixed character, and made up of scholars of all grades and ages, and of both sexes. In fact, most of them are quite too young to understand, and to be benefited by the study. As no one can teach more than he knows, so no one can receive instruction which is not adapted to his age and capacities. To teach agriculture to children so as to make them understand it, is no easy matter, because it embraces subjects which are entirely above, and beyond their comprehension. To make them understand analytical chemistry, natural history, theoretical and practical agriculture, requires no small degree of knowledge and skill. To be successful, the teacher should exemplify his instruction. He should be able to hold the plow, to drive the team, to use the scythe, the rake, the ax, the shovel and the hoe. There are a thousand things to be learned, which can be learned only by actual observation and example on the farm. Scholars can readily do whatever they see their teacher do, though they may not be able to understand his lectures, or what is laid down in the textbook. The way to teach agriculture to the young, is by example, by showing the best methods of cultivation, and how to do correctly, and in the best manner possible, the various kinds of farm-work.

I repeat, that I object to the study of agriculture in our common schools; first, because it would injure the schools by diverting the attention of the scholars from their necessary studies, and greatly disqualify them for future usefulness; secondly, because our teachers are not qualified to teach it, and have no means of explaining it; and thirdly, because the scholars generally are not old enough to understand it, and have no time to devote to it, without neglecting their other studies.

Warwick, June, 1862. JOHN GOLDSBURY.

BENEFITS OF THE ANGLE WORM.

Though the angle worm yields a considerable amount of food to the birds and fish that grace the dinner-table, it is much more beneficial to man as a fertilizer of the land. Subsisting on the earth through which it burrows, with an occasional meal from a decaying tuber or leaf, its peculations from the husbandman are of the smallest nature; whereas it lightens the earth's surface by its burrowings, and thereby aids the spreading of the roots of all cereals and bulbs; and the burrows also carry down water after heavy rains, that but for them, would often gather in surface pools, and thereby injure the crops; and they also admit the air to the soil to a depth which by natural means it could not reach. The earth ejected by them also tends to the improving of the soil; and instances are known whereby these droppings, or "worm-casts," caused, in a few years, a considerable increase to the depth as well as the quality of the soil. Mr. Darwin, the naturalist, gives an account of a case of this kind which he tested, and from experiments he clearly proved that, in an old pasture, a layer of cinders and lime had been covered within a few years, to the depth of an inch, by the castings of worms. "On carefully examining," he also wrote, "between the blades of grass in the fields above described, I found scarcely a space of two inches square without a little heap of cylindrical castings of worms." A week or two

ago we chanced to walk through a very old pasture, and we were much struck by the number of the worm-casts it showed. They were, we are certain, nearly if not as numerous as those mentioned by Mr. Darwin, and they darkened the field so much, though the grass was growing, that they caused some parts of it to look as if newly top-dressed.—*Scottish Farmer*.

WEST'S IMPROVED PUMP.

The cuts which accompany this article give a representation of the external appearance of two patterns of the pump patented by J. D. West & Co.

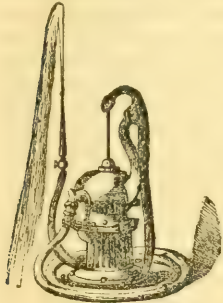


FIG. 1.

It is a double-acting pump, throwing the same amount of water at each motion of the handle, up or down. The house pump, (Fig. 1,) is of cast iron, a very neat and pretty design, and can be used as any other house pump, or, with hose attached, water can be forced to any required distance, for watering the garden, wash-

ing windows, or any of the numerous purposes for which water is so often needed at a distance from the source of supply.

The well and cistern pump, (Fig. 2,) is of the same internal construction, but is made with a long piston rod and discharging pipe, so that when placed in a well, out of doors, the pump itself is entirely below the curb of the well, out of danger from frost. By attaching hose, or by a pipe under ground connecting with the pump, water can be conveyed as needed.

We are about setting one of these pumps, not, however, where it will have a great opportunity of distinguishing itself, as the work we shall give it is light, and may report in regard to its action, at some future day. Meantime it is only necessary to say that the pump has received commendation from the highest sources, and that Solon Robinson, whom every farmer knows, says no farmer can afford to be without it, who has to draw his water from a well or cistern.

This pump was awarded a silver medal at the last Mechanics' Fair held in this city.

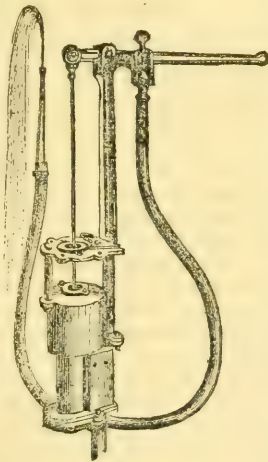


FIG. 2.

THE NEW YORK HORSE MARKET.

We have been lately a good deal in the Horse Market, trying to learn the fact, if it existed, that "the war has ruined," as we were repeatedly assured it had during the dull state of trade that really existed last autumn and winter. We have failed to discover the ruin. On the contrary, we find the stables in Twenty-fourth Street very fairly supplied with a well-assorted stock of horses; and though sales are not effected quite as lively as we have seen them, the horses do find buyers at liberal prices. Indeed, the prices must be higher, for they are decidedly so in the country. A class of horses that farmers would have willingly sold a year ago at \$150 each, are now in demand at \$175 or \$200 each.

This covers the class of good, strong, well-made horses. On higher-priced horses the advance is still greater. It is less in proportion on such as are mostly used for stages and city railroads. The army contracts, at low prices, notwithstanding they absorb a great many horses, have a tendency to keep the price of ordinary horses down, because a person who wants a low-priced horse for his own use, regulates the value upon the army standard, so that when a seller asks a higher price, he is at once told that he is above the market.

But for the class of horses suitable for all work, and good looking enough to make a fair show on the road, the army rates fix no standard, and a well-matched pair of this sort sell pretty readily at \$500 to \$600, and higher, if speedy. Fast trotters and fancy-matched pairs, and elegant coach horses, sell at fancy prices, according to circumstances, up to ten or twelve hundred dollars a pair. And notwithstanding the assertion so frequently made, that the war, cutting off further custom, would destroy the market for this class, we believe that it is about as good now as when we had the whole of Dixie for customers.

It is true that the appearance of "Southern gentlemen" in the horse-market always raised a commotion, and gave the street a somewhat lively appearance, for the reason that one of them made more "fuss and feathers" about the purchase of a pair of horses than some of our quiet city buyers would, in purchasing all the horses on sale. But we assure our country readers that the absence of Southern buyers has not ruined the business, and horse-dealers are beginning to realize that their real substantial customers are our own citizens. We are certain that we may assure all who are interested in the production of horses, that the present state of the market, and all the signs of the times, warrant us in saying that there never has been a more favorable prospect for the production of good horses.

The destruction of horses by the army has been enormous, and must have the tendency by reducing the stock in the country, to enhance values. That enhancement has already commenced, and dealers do certainly find buyers in this market at the advanced price.

There are more horses selling in this city in June 1862, than there were in June 1861, of all kinds, except it is the cheapest kind of work horses. There are men in this city who have the ability and will combined, to buy good horses. Altogether, then, we must report the condition of the New York horse market in one word—favorable.—*New York Tribune*.

For the New England Farmer.

PREMIUMS ON FIELD CROPS.

MR. EDITOR :—In your last number, (June 7th,) your Western New York correspondent "H," under head of "Rivalry in Farming," very sensibly urges the importance of rivalry in this very important branch of business—but his idea of the cause of a lack of the proper stimulus, or inducement, seems to be "the manner in which premiums are offered for field crops." He says "most of the societies now offer a premium for the largest yield from an acre and half acre of ground, regardless of the expenses in producing it. Premiums should," he continues, "be offered on not less than five acres of ground, and for the greatest yield at the least cost, taking the condition of the land before and after the crop is taken off, into consideration."

I think there are many New England farmers who, (with due respect for opinions of your Western New York correspondent,) entertain different ideas from those expressed by him in some particulars. Situated as many farms are among the granite hills, how many of them would be deprived of the opportunity of competing for a premium if "five acres" of a certain specified crop were the least amount of ground that could be received or entered for a premium! Besides, if I rightly understand the subject, one object in offering or awarding premiums is to create a stimulus, and encourage the idea that it is far better economy to cultivate and till a less number of acres and do it rightly, than to try to cultivate or go over a greater amount of ground and manure it more sparingly; although for the first crop it may seem to be more expensive, yet in the long run such farming will prove to be the most successful. E. W.

E. Westmoreland, June, 1862.

For the New England Farmer.

MUSINGS BY THE HEARTHSTONE.

The shadows of evening have lengthened, and widened, and deepened, and blended into one thick veil of darkness. The moaning of the March wind comes, waking in my breast the echoes of dying memories. The flickering blaze, too, pictures on the wall what imagination sees as the reflected images of departed loved ones, mingled with flitting shadows, like those which cross the lighted pathway of the memory of the heart. What heart is there which has no fountain, from which some deep floodtide of fond recollections will sometimes spring forth, bearing on its bosom the lights and shadows of other years,—no hours of heavenly inspiration, when not only the past, with its fancies, but the present and future, with their realities, are spread out in startling distinctness before the mental vision?

Still, the bright hearthstone glows, and looking into the mass of burning embers, I seem to see contracted images of mighty structures and mountains of living fire, rising and falling in wild confusion, pushing each other up, and bearing each other down, all to settle away at last, in one dead mass, when the element which works the change shall have exhausted their combustible properties.

Thus do appetites and passions work in the human mind when we allow them its controlling power. Ever conflicting with and jostling each

other, they create an unceasing tumult, working the ruin of our better nature. Love of ease wars with animal appetites and ambitious desires. We think we see a terrestrial heaven in rounds of luxurious dissipation; but the brilliant structure proves a misty mirage, leading us into the midst of a great desert of suffering and shame. Instead of shady palms, and fruits, and flowers, and silvery lakes, the wilderness of ruined character, of health and happiness, of body and mind destroyed is spread out before us in all its grim desolation. We have appetites and passions, and they have a proper place in the human mind; a proper sphere in which to be exercised, but should be kept subservient to our higher nature. Intellectual and moral powers, the head—with benevolence, affection and religion, the heart—should be the controlling elements of the mind. Because we have an animal nature, it is not, therefore, necessary that we should become all animal. Live a true life, and in the end its goal is not uncertain. Hopes now bright as the glitter of reflected rays of winter sunlight on the clear snow, may, indeed, prove equally unsubstantial. But looking toward the sunset of life, we see sketched on the horizon, like a mountain of transfiguration, the outlines of a good old age. Its clouds are few, and tinted with colors of rainbow brilliancy, the foreshadowing of a bright to-morrow, while its lofty summit seems to pierce the lower strata of the very heavens. A MONTHLY READER.

Franklin, 1862.

WHAT IS IN THE MOON.

The comparative proximity of our own satellite, the moon, has necessarily rendered it an object of the greatest interest, and it has, perhaps, in a greater degree than the other celestial orbs, been subjected to the scrutinizing observations of the telescope. Since the completion of the great instrument of Lord Rosse, that nobleman has frequently observed it, and its appearance, as seen by the great telescope, is thus described by Dr. Scoresby:

"It appeared like a globe of molten silver, and every object of the extent of one hundred yards was quite visible. Edifices, therefore, of the size of York Minster, or the ruins of Whitby Abbey, might be easily perceived if they had existed. But there was no appearance of anything like water, or of an atmosphere. There was a vast number of extinct volcanoes, several miles in breadth. Through one of them was a line of continuance of about one hundred and fifty miles in length, which ran in a straight direction like a railway. The general appearance, however, was like one vast ruin of nature; and many of the pieces of rock, driven out of the volcanoes, appeared to be laid at various distances."

We have here a strong, nay, a complete confirmation of the most interesting recent discoveries of the continental philosophers, Mælder, of Dorpat, and Baer, of Berlin. The result of their curious and elaborate observations has been a map of what may now, without a figure, be called the geography of the moon, in which the surface of that satellite has been laid out with as much accuracy as that of our own globe. Of this map, a singular contrivance of human ingenuity, Dr. Nichol has given a reduced copy, besides a number of plates,

representing on a larger scale, special parts of the surface. The general character of the moon is highly irregular, marked by huge mountains and pits, the height and depth of which have been accurately measured. About one-third part only of the surface presented to us is comparatively regular, this regular portion being plains, and not seas, as was formerly imagined. There is no appearance of water; and although astronomers are divided in opinion about the existence of an atmosphere, we are to conclude that the moon is not in its present state, adapted for the abode of organized beings. With regard to the mountains, a great number of them are isolated peaks, such as Teneriffe; mountain ranges, of which some reach a great elevation, are also present in the moon, though not a chief feature in its surface. At least three-fifths of its surface is studded with caverns, penetrating its body, and generally engirt at the top by a great wall of rock, which is serrated, and often crowded by lofty peaks. These caverns or craters as they are called, vary in diameter from fifty or sixty miles to the smallest visible space. And it is also remarkable that as they diminish in size, they increase in number.—*English Quarterly.*

For the New England Farmer.

OUR ARBORETUM.

MR. EDITOR:—I once heard an enthusiastic votary of rural adornment strongly advocate the establishment, in our town, of a Park to be sustained at public expense. He thought, "a park of a hundred acres, comprising hill and dale, and water scenery, beautifully laid out, in walks and drives, a perfect arboretum of all the trees and shrubs that will grow in this vicinity, beds of flowers of every variety of hue; with seats and arbors appropriately scattered about," &c., would greatly promote a genial sociability among us, and aid in developing all the finer traits of character in our towns-people. He was not without hope of living to see such an institution flourishing here; and thought it not impossible that some wealthy lover of humanity might furnish the means for its establishment. I agree with my friend in the belief that such a park would be a very valuable institution in any town. And, with your permission, Mr. Editor, I will say to him, and to others, that we already have very nearly the thing that he proposes, only the area of our arboretum is to be measured by thousands of acres, instead of being restricted to a paltry hundred. And if he will thoroughly explore this arboretum, he will find a variety of plants, as large, I think, and certainly as beautiful, as in any field of equal extent within many miles of here. He will find a liberal allotment of rare plants, and a goodly share of those most eminent for beauty of foliage or flower. If I were skilled as a describer of landscapes, I would tell him of the various beauties of scenery to be found there; of cosy nooks with their mossy rock seats; of the beautiful drives that wind about in every direction, some through disused roads, where the carriage bends down the intruding sapling in its passage, some over the soft leaf carpet under ancient pines, some that are not so smooth as those where every grain of sand has been artificially laid, and all been made so even that as you roll along over the surface you are hardly conscious

of motion, but roads where stones and stumps and deep ruts give you every now and then a good shaking that stirs the blood, even though you may have a slow and reliable horse; of those wood-roads winding around and over hills and through valleys, giving glimpses of rocky cliff, of lake, of river, of distant mountain, of green fields, of villages and scattered farm-houses. But trusting that he will see these things for himself, I will pass to the less difficult and shorter labor of naming some of the flowers to be found in the valleys and on the hills, in the woods and on the plains of our large botanic garden. These are so numerous, and so many are worthy of favorable mention, that I hardly know which to select to speak of without trespassing too much on your columns. I will name them nearly in the order of their blossoming.

Among the earliest of our spring flowers, and certainly one of the finest, is to be ranked the *Mayflower*, (*Epigea repens*), sometimes called the trailing arbutus. This is found in several places in this town, though not in large quantities, and probably grows more or less in most towns in this region. It is to be found almost as soon as the snow is off the ground in spring. It is a low vine, creeping among the dry leaves in the woods, and you find the small flowers at the end of the branches, sometimes white, sometimes shaded with a delicate rose color, and always charged with a pleasant spicy odor. Very abundant in Plymouth county, and derives its common name from the ship that brought over the Pilgrims.

The *Liver-leaf*, (*Hepatica triloba*), is another very early and a very beautiful light blue flower. It is not found here, I believe; but it is worth looking for. I once drove twenty miles to the easterly part of Malden, to see it growing in its wild home. I found it on a steep, rocky hill-side, shaded by young wood, and the beauty of the flower well repaid for the trouble of finding. I brought away a number of plants, and if they fulfil their promise it may not be so difficult for the flower lovers of some future generation to find the hepatica peeping at them from among the dry leaves in some quiet nooks of the Concord botanic garden.

The *Houstonia*, a little bluish-white flower, common everywhere in May and June, has also a claim to be called beautiful, even though so abundant that we can hardly avoid crushing many under our feet as we walk in the fields. We are generally inclined, perhaps, to overlook the beauties that are every day before us. We want something that is dear bought, or rare, or far-fetched. If the *Houstonia* had come from our antipodes in Australia, or from some tropical region, and were difficult of cultivation, I doubt not it would be a favorite. The *Violets* come into flower at the same time; and notwithstanding their commonness, are generally petted. There are many species; I have found at least eight, on my own little farm. The largest and most common violet in this town, the pedate, or bird's foot, is often so abundant as to give to large portions of our dry pastures a blueish purple appearance, that may be distinctly seen at a considerable distance. This is slightly fragrant, as are also the two white species that are common here.

We have three species of *Andromeda*, in Concord, the earliest of which, (*Andromeda caliculata*), flowers in April. It grows chiefly in wet, boggy places, is a small evergreen shrub, and forms its

flower buds in autumn. They appear on the under side of the slender stem, at the axils of the leaves. The flower is white, shaped much like that of the blueberry. Stems of this plant taken in February, or March, and kept in water in a warm and light room, for a week or two, will flower nearly as well as in the open air, later in the season. We have had the flowers, thus produced, all through the month of March. There is another species, (*Andromeda polifolia*), a smaller plant, with narrow, bluish-green leaves, and bearing at the tip of its stem a drooping cluster of white flowers tipped with red; very beautiful, and also very rare. I have only seen it in one small shaking bog at the south-west part of the town.

The *Convallaria*, or small Solomon's seal, with its cluster of snow-white flowers at the top of its short stiff stem; the *Trientalis*, exhibiting on its slender stem, starting from a whorl of green leaves, a flower of such pearly whiteness that it might well be adopted as an emblem of purity. These thrive best in cool and moist shady places. In such situations they grow in great abundance, and are very beautiful then.

The *Fringed Polygala*, a fine purple flower growing on a short stem, has a beautiful appearance mingled with the young grass in May. It grows by the road-side in the southwest part of the town, and more abundantly in other places not so readily found. Likes a rather moist soil.

The *Rhodora* is not, perhaps, common enough to have been seen by all, yet it is well diffused in this neighborhood. It is a bright purple flower, appearing before the leaves, late in May, in most places. This flower suggested a fine poem, to Mr. Emerson, in which he thus apostrophises it.

"Rhodora ! if the sages ask thee why
This charm is wasted on the earth and sky,
Tell them, dear, that if eyes were made for seeing,
Then Beauty is its own excuse for being.
Why thou wert here, rival of the rose !
I never thought to ask, I never knew ;
But in my self same ignorance, suppose
The self some Power that brought me here, brought you,"

The *Cranesbill Geranium*, a showy and delicately beautiful flower, is one of the most common ornaments of the moist and partially shaded borders of our swamp lands; begins to blow about the middle of May, and continues through June.—Many flowers less beautiful than this are cultivated in our gardens. Perennial.

The bulbous *Arethusa*, a rich purple flower, growing single on a leafless stem in many of our wet, mossy swamps, should have a word of praise, though all who have seen it will agree that it carries its own recommendation in its face. I was upon the point of expressing regret that it had not a green leaf of its own, but am not sure that it does not now better harmonize with its mossy surroundings. Last of May.

The *Ledum*, or Labrador tea, is a small evergreen shrub, growing in cold bogs, and has a pretty cluster of small white flowers. It belongs to the far North, or to mountain regions, and has been found in only one small swamp in Concord, and in no other place within many miles. The leaves have a rusty appearance, rolled back on the edges, wooly on the under side, and possessing a strong odor, resembling that emitted by an angry wasp.

The *Linnæa* is another rare flower, found here in only two small patches. The plant is a slender evergreen vine, creeping among the leaves in shady

woods. Its small nodding flowers are very fragrant. It was a special favorite with Linnæus, and chosen by him, in preference to all more showy and ambitious candidates, to bear his name.

The *Harebell*, (*Campanula rotundifolia*), named and praised by all the poets, has not been found growing wild in Concord, but is common in Essex county and the eastern part of Middlesex. I have a plant in my own private little garden, and am much pleased with its past performance and present promise. Last Summer it hung out its blue bells about the end of June, and continued in flower through September.

The *Mitchella*, also often called twin-flower, is another very pretty inhabitant of the shady woods, common everywhere. It is a trailing vine, peculiar in having two perfect flowers united at the base on one germ, the two flowers producing only one bright scarlet berry, which remains on the vine through the winter, and even after the new flowering in June. Also called checkerberry and partridge berry.

M. P.

Concord, June 15, 1862.

AMERICAN POMOLOGICAL SOCIETY.

In conformity with a Resolution adopted at the last meeting of this National Association, the undersigned, President thereof, gives notice that its NINTH SESSION will commence in the HALL OF THE MASSACHUSETTS HORTICULTURAL SOCIETY, corner of Washington and West Streets, Boston, Massachusetts, on WEDNESDAY, SEPT. 17th, 1862, at 12 o'clock, noon, and will continue for several days. All Horticultural, Pomological, Agricultural, and other kindred institutions in the United States and the British Provinces, are invited to send Delegations as large as they may deem expedient, and all other persons interested in the cultivation of Fruits are invited to be present, and to take seats in the Convention.

The present season promises to be the most propitious for Fruit that has occurred for many years, and it is anticipated that the coming session, which takes place at the same time with the Annual Exhibition of the Massachusetts Horticultural Society, may be made one of the most interesting which has ever been held by the Society. All the States and Territories are urgently invited to be present, by Delegation, at this meeting, that the amicable and social relations which have heretofore existed between the members of the Society may be fostered and perpetuated, and the result of its deliberations, so beneficial to the country at large, be generally and widely diffused.

Among the prominent subjects to be submitted at this session will be the Report of the Special Committee appointed to revise the Society's Catalogue of Fruits, and thus to ascertain what varieties are adapted to the different sections and districts of our country. The various State and Local Committees who have not already made their Reports on the Revision are, therefore, solicited to forward them, without further delay, to P. BARRY, Esq., Rochester, N. Y., Chairman of said Committee. And it is further requested, that all other Reports, which are by the By-Laws made returnable to the General Chairman of the Fruit Committee, now deceased, may also be addressed to Mr. BARRY, as aforesaid.

Members and Delegates are requested to con-

tribute specimens of the Fruits best adapted to their respective districts—to furnish descriptions of the same, their mode of cultivation, and to communicate whatever may aid in promoting the objects of the Society and the science of American Pomology.

Each contributor is requested to come prepared with a complete list of his collection, and to present the same with his Fruits, that a Report of all the varieties entered may be submitted to the meeting as soon as practicable.

All persons desirous of becoming members, can remit the admission fee to THOMAS P. JAMES, Esq., Philadelphia, or the PRESIDENT, at Boston, who will furnish them with the Transactions of the Society. Life Membership, Ten Dollars; Biennial, Two Dollars.

Packages of Fruits may be addressed as follows: "AMERICAN POMOLOGICAL SOCIETY, care of Mass. Hort. Society, Boston, Mass."

MARSHALL P. WILDER, *President*.

THOMAS W. FIELD, *Secretary*.

For the New England Farmer.

INSECTS INJURIOUS TO VEGETATION.

BY JUDGE FRENCH.

In 1837 a Commission for the Zoological and Botanical Survey of Massachusetts was ordered by the General Court. To Dr. Thaddeus William Harris was assigned the department of Insects, and his report was first published in 1841, at the expense of the State. In 1852, the first edition having been exhausted, a second was published, under the direction of the author, enlarged and improved by him, and in 1859, by a resolve of the Legislature, the Secretary of the Board of Agriculture was directed to issue a third edition, with additions and with illustrations which were wanting in the former editions.

We have before us, as the result, perhaps the most perfect and reliable work of the kind ever published. In point of mere mechanical execution, paper, engraving, printing and binding, the book is said, by competent judges, to be equal, if not superior, to any other volume ever published in America. Indeed, the State edition, with its tinted paper and embossed cover, seems designed rather for the parlor table, than the hard hands of the farmer.

The hundreds of wood and steel engravings, now first published, have been executed under the direction of Prof. Agassiz, and by him carefully compared with living specimens, and Mr. Secretary Flint has availed himself of the first talent in the country to make the work honorable to the State.

The publishers, Crosby & Nichols, have recently issued an edition less expensive than the first, from the same plates, with colored illustrations, and in all respects like the other, except in the cost of paper and binding. This edition is sold at \$3.50 a copy, and although only of about

half the cost of the State edition, is as elegant a volume as any man ought to make common use of.

HOW MANY INSECTS THERE ARE.

An English entomologist has stated that on an average there are six distinct species of insects to one species of plants. Mr. Harris thinks there are four to one in America, and that as there are 1200 flowering plants in Massachusetts, it is fair to estimate 4800 different species of insects in this State. This will furnish excuse enough for the omission, to any reader, who shall find some specimen of an insect which has not sat for its portrait in this collection. Mr. Harris modestly entitled his work a treatise on *some* of the insects injurious to vegetation, and the attempt has been made throughout to inform the reader of the habits of such as are most common and most destructive. Such a work is invaluable to the farmer and fruit-grower. We can only arrive at the means to defend ourselves against such pests as the canker worm, the curculio and the wheat flies, by carefully studying their habits and methods of reproduction, and with all that art and science can do for us, we shall always find warfare with those enemies to be a condition of success.

PROPENSITY TO DESTROY EACH OTHER.

Mr. H. W. Beecher said, when some one desired some solution of the doctrine of natural depravity, that it was of less importance to know how sin got into the world, than how to get it out; that if a man saw a pig in his garden, his first business was to drive him out, and not to sit down and speculate on the question of how he got there. Why all animals were created with a propensity to bite, and worry, and devour other animals, is not very plain, but the fact is manifest that if, in Adam's fall, we sinned all, the beasts and insects shared in the general wreck. The fact that the birds devour the insects, and that some insects, harmless to us, are destructive enemies of our worst foes, is of practical daily use, and one of the great problems in life is to know how to distinguish friends from foes. That crows pull up corn, and that robins eat cherries, are unpleasant circumstances to some of us, but whether these birds do not earn their living by devouring noxious insects and worms is another question. We have seen a man shoot a whole brood of orioles from nests that had hung on the old elm by the house for a generation, because they destroyed his green peas. He said they did it solely for mischief, for they merely shelled out the peas and left them. We thought if he knew as well as we did how many pea grubs he ate with his peas, and that the orioles only wanted the grubs, he would be willing the poor birds should have their share of them.

Not only do birds destroy insects, but every in-

sect seems to have some mortal foe, some evil spirit, as it were, ever in close pursuit of him. Plant lice, for instance, are savagely slaughtered by the innocent looking little beetle, called the lady-bird, as they are also by several species of fly. Kirby says that he found it very easy to clear a plant or small tree of lice, by placing upon it a few larvæ of these flies. If we only knew fully the habits of the various insects, no doubt we might train up packs of hunters that would take the track of plum weevils and canker worms, and hunt them to death, as hounds follow a fox; but the difficulty is, as before suggested, that we do not know friends from foes. There is a world-wide difference between a patriot and a *secesh*, but they look so much alike, that frequently we mistake and fire on our friends.

DOR-BUGS, PEA-BUGS AND ROSE-BUGS.

These may be set down as unmitigated rascals, with some others already alluded to. We use their common New England names, which are neither elegant nor accurate. The dor-bug does more mischief than is generally known. The grub, which is a white worm, with a brownish head, devours the roots of grass and other plants, often destroying large tracts of the latter. In Europe, the cockchafer, which is of the same class, has at times been destructive of all vegetation for miles. About seventy years ago, a farmer in Norwich, in England, with his men, gathered eighty bushels of these beetles, and the English societies for many years offered premiums for the best account of this insect, and the means of checking its ravages. The common dor-bug is frequently destructive to the foliage of cherry and other fruit trees. They may be effectually checked by shaking them off at night, upon sheets. They may then be destroyed with boiling water, and fed to swine. They may be better gathered early in the morning, when they do not attempt to fly.

We would not be so unfeeling as to publish what we know about pea-bugs, were it not so easy to guard against them. If you examine early green peas on the table, you will often find on them a whitish spot, under which is a small maggot, which when properly boiled and buttered, is perfectly healthful, and no doubt very nourishing; but as many prefer their meat served up in a separate dish, it is well enough to know how to effect that object. The pea-bug is usually planted in the pea. About the time the pea is half-grown in the pod, she comes up from the ground, punctures the pod and deposits in it opposite each pea, an egg, which hatches and becomes a grub, and works its way into the pea, and if not eaten green, is transformed into the weevil, which remains quietly in place till the next spring. Now, if you will put the seed peas into water nearly boiling.

the weevils will all die, or come out, or if the peas are kept over one season, the weevils will not survive. If weevils are planted, they are sure to come up. As they fly very well, they may come to us from our neighbor's grounds, but if market-men should find that their customers paid more for green peas free from grubs, they would soon destroy them by some of the means suggested.

The rose-chafer, or rose-bug, is sometimes a great scourge not only upon the rose, but upon the grape also. The eggs are deposited about four inches under ground, where they hatch in autumn, descend below frost for the winter, ascend again in spring, and stop near the surface, where the grub becomes a pupa, and in June, at about the time of the first blooming of roses, assumes the final form of a beetle, digs its way up to the surface, and enters upon all such mischief as its evil nature prompts. The only method of destroying them is by picking or shaking them off, and putting them into boiling water. A few days of persevering effort will reduce their numbers, and give the roses a fair chance.

We advise our readers to study carefully Dr. Harris's Treatise, both for pleasure and for practical, useful knowledge, and at the same time to carefully study from nature the habits of the insect tribes.

VOICES OF ANIMALS.

There is a chapter in the natural history of animals that has hardly been touched upon as yet, and that will be especially interesting with reference to families. The voices of animals have a family character not to be mistaken. All the canidæ bark and howl. The fox, the wolf, the dog have the same kind of utterance, though on a somewhat different pitch. All the bears growl, from the white bear of the Arctic snows to the small black bear of the Andes. All the cats *miau*, from our quiet fireside companion to the lions, and tigers, and panthers of the forest and jungle. This last may seem a strange assertion; but to any one who has listened critically to their sounds and analyzed their voices, the roar of the lion is but a gigantic *miau*, bearing about the same proportion to that of a cat as its stately and majestic form does to the smaller, softer, more peaceful aspect of the cat. Yet, notwithstanding the difference in their size, who can look at the lion, whether in his more sleepy mood, as he lies curled up in the corner of his cage, or in his fiercer moments of hunger or of rage, without being reminded of a cat? And this is not merely the resemblance of one carnivorous animal to another; for no one was ever reminded of a dog or a wolf by a lion. Again, all the horses and donkeys neigh; for the bray of the donkey is only a harsher neigh, pitched on a different key, it is true, but a sound of the same character, as the donkey himself is but a clumsy and dwarfish horse. All the cows low, from the buffalo roaming the prairie, the musk-ox of the Arctic ice-fields, or the jack of Asia, to the cattle feeding in our pastures. Among the birds this similarity of voice in families is still more

marked. We need only recall the harsh and noisy parrots, so similar in their peculiar utterance. Or take, as an example, the web-footed family. Do not all the geese and the innumerable hosts of ducks quack? Does not every member of the crow family caw, whether it be the jackdaw, the jay, the magpie, the rook, in some green rookery of the old world, or the crow of our woods, with its long, melancholy caw, that seems to make the silence and solitude deeper! Compare all the sweet warblers of the songster family—the night-ingles, the thrushes, the mocking-birds, the robins—they differ in the greater or less perfection of their note, but the same kind of voice runs through the whole group.—*Agassiz.*

For the New England Farmer.

POOR AND RICH LAND.

MESSRS. EDITORS:—After having resided in different towns in four different counties in New England, for more than 75 years, and making such observations on farmers and farming, on rich land and on poor land, as I was able to do, I have come to the following conclusions:

First, that industry, economy and good calculations are absolutely necessary, and of main importance, on any kind of land, in conducting a farm. The next consideration is for the farmer to select good land if he can, but if destiny has decided his lot, (as it will upon the greater number,) to settle upon poor land, let him make the best he can of it. Here, in New England, we find several varieties of what is called poor land, as well as varieties of rich land. Large tracts of pine plains, swampy lands, barren knolls and mountain tops, constitute the poor lands. Large swells, covered with hard wood growth, or from where hard wood has been removed, with alluvial valleys, and some other varieties, are considered as a class belonging to rich lands.

Farmers that settle upon the rich lands, under good management, get larger crops than those do on the poor soil, we suppose, as a matter of course, but when we take into consideration the extra amount of labor necessarily expended on strong, hard land, sometimes stony, more than what is required to cultivate the pine plain land, the result as to profit would be doubtful. On strong, hard land, 40 or 60 bushels of corn to the acre, in New England, has been considered a fair crop, and on the plains, from 30 to 40 bushels. Corn is but an item, our marketable crops are roots of various kinds, hay, wood and lumber, apples, pears, cranberries and other fruits, and when we come to look at the lands most favorable to these productions, we find many of them included in the category of poor lands. I have lived in four or more different towns composed of strong, hard soil, some of it predominating with clay. I have lived in towns where a thin, porous, plain soil, predominated, the land easily cultivated, and susceptible to manure with advantage. I have observed that in towns consisting of strong, compact soil, that hay was the staple, or principal commodity, and that wood was of very tardy growth, if it would grow at all, and that farmers complained bitterly, after selling their hay and fruit, to be obliged to spend the money, thus obtained, for manure, or let their fields run to barrenness, and I have seen many ex-

cellent farms, in other respects, that did not produce wood enough to supply the houses with fuel. These strong land farms, situated upon beautiful locations, make a splendid show, and are more saleable than farms consisting of boggy, peat land, cranberry meadows, sandy plains and growing forests, that will produce a crop of wood and lumber once in from 25 to 40 or 50 years. The advantages of the strong, heavy soils, are their aptitude to produce hay and feed for cattle, apples, and some other kinds of fruit, and heavier crops of some kinds of grain and roots, than usually grow on light land, with the important consideration of its being a more saleable article.

On the other hand, the pine plains and boggy land produce peat for fuel, cranberries, the king of fruits, without manure, wood in rapid succession, bog-hay, better than nothing, good, soft water, a privilege worth more than a thousand acres of prairie, with poison water, and also respectable crops of grain, fruits, roots and other productions, under a less laborious cultivation than is necessary on the stiff, strong soils.

I have seen numerous hard wood farms, or farms originally covered with hard wood, pleasantly located in the county of Essex, many of them now almost destitute of wood for fuel. I have been acquainted with numerous farmers and farms in the county of Middlesex, the farms consisting of the level, pine plains, swamps and bog-meadows, and it is with difficulty that I can decide which of the parties is best off. Those on the hard land farms sell hay, butter, fruit of some kinds, beef and vegetables. Those on the pine land farms sell wood, lumber, cranberries and other fruits, some beef, butter, and various other little commodities in common to both kinds of soil. As far as I have investigated the conditions of both classes of farmers, I have been inclined to the opinion that the class of farmers living on the plains have fewer mortgages to remove from their lands, and more ready cash on hand for purposes of convenience, and that their land is more easily cultivated, if their crops are not so abundant to the acre. I have supposed the farmers on both kinds of soil to be equal in industry, economy and skill.

SILAS BROWN.

North Wilmington, Mass., 1862.

THE IRISHMAN IN IRELAND AND IN AMERICA.

The Irishman when he expatriates himself to one of those American States loses much of that affectionate, confiding, master-worshipping nature which makes him so good a fellow when at home. But he becomes more of a man. He assumes a dignity which he never has known before. He learns to regard his labor as his own property. That which he earns he takes without thanks, but he desires to take no more than he earns. To me personally he has, perhaps, become less pleasant than he was. But to himself! It seems to me that a such a man must feel himself half a god, if he has the power of comparing what he is with what he was.

It is right that all this should be acknowledged by us. When we speak of America and of her institutions we should remember that she has given to our increasing population rights and privileges which we could not give—which as an old

country we probably can never give. That self-asserting, obtrusive independence which so often wounds us, is, if viewed aright, but an outward sign of those good things which a new country has produced for its people. Men and women do not beg in the States; they do not offend you with tattered rags; they do not complain to Heaven of starvation; they do not crouch to the ground for half-pence. If poor, they are not abject in their poverty. They read and write. They walk like human beings made in God's form. They know that they are men and women, owing it to themselves and to the world that they should earn their bread by their labor, but feeling that when earned it is their own. If this be so—if it be acknowledged that it is so—should not such knowledge in itself be sufficient testimony of the success of the country and of her institutions?—*America, by Anthony Trollope.*

For the New England Farmer.

LITTLE THINGS:

OR, A WALK IN MY GARDEN.

THE PLUM TREE.

Two essential things are necessary in the successful cultivation of the plum. The first is, to give them a chance to grow about as thriftily as possible, and then carefully head in the year's growth at least one-half, in order to force out a quantity of fruit spurs. I generally see this neglected among farmers, and the consequence is, we have a few long barren limbs, when the whole top should be covered with these spurs. I raised a bushel and a half of plums two years ago from a small tree. It bore just as many as could find a place to hang on the tree. Nurserymen understand these things, and so should farmers who buy of them. Plum trees that are highly cultivated, will, in bearing years, blossom profusely, and be more than a match for the curculio to puncture them all, while those which grow in grass plots and receive little cultivation are pretty sure to be destroyed. It is better to depend upon a few crops from a tree at a high rate of cultivation, than to look for a small crop and a long life. So far as my opinion goes, the farmer who only wishes for a few trees should have only two or three of the most productive and hardy sorts. These are the Lombard, Imperial Gage and Jefferson Plum. These will ensure good crops if anything will. Fancy cultivators may increase the number of varieties indefinitely. But who is that man yonder, just entering the garden gate? O, it is one whom I have long pictured to myself as

A CONTENTED MAN.

I have a friend whom I, for a long time, have looked upon as a contented, and, consequently, a happy man. He is not a wealthy man; nor has he acquired fame in civil or military life, and fallen back into a happy retirement. He is a shoemaker; and I have looked at him as he worked on his bench with the feeling that there was such a thing as one contented man in this world. He had a good education; had travelled extensively, and wrote poetry worthy of more than a passing notice. He touched the guitar most delicately, which, with his voice, caused breathless silence to all within hearing. For a change, he would spend

an hour with the pencil, and transfer to canvas some mountain or cottage scene. Stepping into his shop, I have conversed with him on all these subjects to which allusion has been made, and found in him my teacher, and a man of the finest sensibilities.

My first thought was that of wonder, that my friend should take up, keep and be satisfied with his occupation, but I soon reasoned myself into the belief that he was a real philosopher, and knew better than I how to be happy. He was an excellent workman, and had the confidence and patronage and good will of everybody. I therefore came to the conclusion that he was a contented man. He was attentive to his religious duties, and recognized the claims upon him, from whatever source they came.

Matters went on in this way for some time, when, all of a sudden, I was surprised to hear that my philosophical friend had sold out his stock, and had resolved to enter one of the learned professions! I seated myself in a chair and fell into a strange reverie upon the uneasy condition with which mankind is so universally affected. Still I learned one valuable lesson, that in any position in life there may be a cultivated mind and heart, a dignity and honorable character which will command the respect of the public. I cannot say that my friend was wrong in his course; but he must bid adieu to all personal comfort, and transfer it all for the benefit of others.

Happy the man that is contented with his lot, and who can pass through the whole year without at any time repining at his condition. Where can such a man be found?

P. S. Since writing the foregoing, I learn that he is not intending to change his occupation, but that he is gone out West where he can make more money! Moreover, he is not married.

HOMINY ALL THE YEAR ROUND.

While adjusting a self-shutting gate to my garden the other day, a neighbor came along and put the strange question, "Do you love hominy?" "Yes," I replied, "but I don't see it at this time of year." "You can have it as well now as in autumn," said he. So he told me how to have hominy all the year round.

Take your corn and put it into water at night just so as to wet it, take it out immediately, and the next day tell your miller to grind you some hominy. That is all. As this may be new to some, I give it for the benefit of every lover of hominy.

While looking over my orchard to-day I have been reflecting on the subject of

SPRING PRUNING,

which I have practiced in the same orchard for thirteen years past. My conclusions are these. If a tree is pruned in spring, it will certainly bleed and be of little value. Exceptions to this may sometimes be seen in trees of a vigorous growth when the leaves seem to elaborate all the sap and they do not bleed. But how is it when the wounds are protected? Formerly I covered the wounds with grafting wax, but the wood is liable to rot beneath in large trees, and I now paint them with yellow or red ochre and linseed oil, and the wood becomes hard and heals readily. Are there any physiological effects different in their

influence on the tree when pruned at different seasons? I know of none. My practice now is to paint every wound, no matter how small the tree.

The editor of the *Farmer* advocates August pruning. But let us see. I find in the spring that a large limb has winter-killed. Now, if I let that remain till August before I saw it off, where will be the line of demarcation between the living and dead parts. If I cut it in the spring, the new wood begins at once to form over the wound; if I leave it till August, one year must be lost, and I am inclined to think that, if a dead limb remains during the summer, the body of the tree becomes more affected below the dead branch than if removed, just as the mortification in a toe will communicate its poison to the trunk. These are plain, practical questions, and rather lead the mind of those most experienced in these matters not to be too tenacious of any fixed course, but to adapt their practice to circumstances. I have proposed these questions without feeling absolutely certain that I am right. I ask for light. N. T. T.

Highland School, Bethel, Me., June 6, 1862.

REMARKS.—Where does the editor of the *Farmer* "advocate August pruning?" We do not remember to have done so, but have recommended pruning from the fifteenth of June until midsummer, because the sap has then—in a great measure—been withdrawn from the stem and large branches of the tree, by the leaves, and comparatively little is left to flow out when the tree is cut. If the work was neglected in June, then, we say, prune in the autumn, after the leaves have fallen, because at that time the tree is in a comparative state of rest, and wounds then made will rarely bleed.

Not being able to finish pruning last June, in a neglected orchard, we continued the work into November, removing a large number of limbs that should have been taken away two or three years earlier. This spring, and up to the present time, hundreds of these wounds have been carefully examined, and with *two exceptions* only, they are dry and hard, and present all the usual indications that they will rapidly heal over.

We are glad to notice, all about us, that summer pruning is becoming common, instead of doing the work in March, April or May.

A HINT THAT MAY BE GENERALLY TAKEN.—A friend informs us that at a concert which took place in a town that shall be nameless, last Friday evening, a gentleman in the audience rose up just as the third piece on the programme had been performed, and said: "Mr. Conductor, will you oblige me, sir, by requesting your vocalists either to sing louder or to sing in whispers, as there is a conversation going on close by where I sit that is conducted in such a loud tone as to entirely hinder my enjoyment of the music. I prefer, certainly, to hear the concert; but if I cannot be so privileged, I desire to hear the conversation." There was an extremely quiet and attentive audience in the hall during the rest of the evening.

For the New England Farmer.

FARMERS AND NATURAL HISTORY.

MR. EDITOR:—It is sometimes interesting and amusing to learn from correspondents what is expected of farmers, who, pre-eminently, live by the sweat of the brow. When a person has learned to distinguish a crow from a robin, or a hawk from a dove, a grasshopper from a house-fly, a butterfly from a mosquito, a flea from a spider, a toad from a frog, or an elm from an apple tree, he at once sets up to exhort farmers to study Natural History, urging the absolute necessity of their becoming thoroughly acquainted therewith, in order to succeed well in growing potatoes, turnips, corn, wheat and grass. What help does the farmer, for example, well versed in entomology, derive therefrom on a visitation of the caterpillar, the palmer worm, the canker worm or the army worm, over his unread neighbor? Are not his fields and orchards as liable to their visitations as those of his neighbor who makes no claim to a knowledge of this department of natural history? When these learned doctors in entomology are applied to for relief from the depredation of insects, is it obtained? Let those who have tried to obtain it, answer.

It does not follow, because a farmer cannot systematically name birds, quadrupeds, reptiles and insects, coming under his observation, that he knows nothing about them. Observation gives farmers a good practical knowledge of the habits of the animal pests that frequent their fields, orchards and gardens. When a learned D. D. says, "Farmers hardly know a chipping sparrow from an owl," he shows himself as ignorant of farmers, as they, forsooth, are of his transcendental speculations in metaphysical hypotheses. Everybody, almost, seems ready to echo the charge that farmers are a terribly ignorant class of men. It has been truthfully said, that "It takes wisdom to see wisdom, knowledge to discover knowledge." In view of this old saying, let these learned pundits first prove their claim to being wiser and more learned than farmers. Until they do it by some more conclusive way than that of accusing farmers of ignorance, I, for one, shall pity them rather than feel annoyed by their impertinence.

I claim for farmers, as a whole, that they understand their business as well as any other industrial class; and in confirmation of this, allow me to state what no man can controvert, that they produce many times more personal and national wealth than all other industrial classes, while it is true, beyond successful denial, that the number of farmers is many times greater than that of all other business men, yet the number of bankrupts among farmers is very much smaller than that found in the other classes of men engaged in mercantile and other manual labor pursuits.

While I would not object to a farmer's getting all the knowledge he can, as he journeys on, in regard to all subjects for which he has taste and leisure, yet I would not impress him with the notion that he cannot farm, and farm profitably, too, without being an Agassiz in the Natural History of Animals, or a Gray in Botany, or a Hitchcock in Geology, or a Dana in Mineralogy, or a Liebig in Organic and Agricultural Chemistry. As well might one maintain that a minister, lawyer or doctor is unfit to practice his profession until he first

makes himself thoroughly master of, and conversant with, the curriculum of knowledge, or to maintain that a person cannot enjoy health, until he is thoroughly conversant with a knowledge of anatomy and physiology. Farming is an art, and those who practice it as such, are they who have been the best and most successful farmers, and have accordingly made the most money. Let intelligent farmers beware of "professional ignorance," says one practical FARMER.

THE VALUE OF COAL ASHES AND CINDERS.

Coal ashes are, as a general thing, thrown away and thought a nuisance. But after some experience I am inclined to take a different view of the matter.

It may be, and undoubtedly is the case that they are less valuable than those derived from wood. The ash of coal contains gypsum, lime and phosphoric acid, but its main bulk is composed of insoluble silica. I have found coal ashes to be very useful in the peach orchard; in the fall they should be spread around the root of the tree at the rate of a good-sized wheelbarrow load to each tree, and spread some five inches thick at the trunk, and sloping off gradually all around; the ashes should be allowed to remain in this position until the tree is out in blossom, when they should be spread over the orchard. I consider that I have derived much benefit from this plan, and would account for it in the following manner. We all know by experience that a large pile of coal ashes will retain the frost much later than common soil—the ashes at the trunk of the tree (as I have proven by experiments,) retain the frost later in the spring, and prevent the trees from coming out in bloom too soon. Another good effect is that ashes thus applied will keep off the peach worm, which is often so destructive to the trees. Besides these mechanical advantages, coal ashes contain substances which are beneficial to vegetation of all kinds. Last winter I kept a portion of coal ashes under shelter until the ground was well frozen, when they were spread as before; if the effect should be thereby changed, I will report at the proper season. This system will apply as well to other fruits as to the peach. I have tried it with the same success on apple, pear and cherry trees.

If coal ashes produced no other advantage than the mechanical one of loosening the soil, they would still be valuable. But the following analysis, by Prof. Norton, proves them to be valuable as a manure. He found one hundred parts of ash from white ash coal, without any wood ashes from kindling, contained of

Insoluble silica.....	88.68
Soluble.....	0.09
Alumina.....	3.36
Iron.....	4.03
Lime.....	2.11
Magnesia.....	0.19
Soda.....	0.22
Potash.....	0.16
Phosphoric acid.....	0.20
Sulphuric acid.....	0.86
Chlorine.....	0.09

Those who advocate the application of iron to peach trees will find another reason for my success in the amount of that substance contained in coal ashes.

One of my neighbors has for many years applied coal ashes to his potato patch as a preventive of rot, and has not since been troubled with rotten potatoes. He retains the same piece of ground several years in succession, and applies coal ashes in large quantities each year. He attributes his success to the loosening or mechanical effects of the ashes, but I attribute his and my own success in this line to early planting and early digging.

As to whether it will pay to buy or haul coal ashes far, I cannot say, but by the above analysis we see that nearly ninety pounds in every one hundred is of no value as a manure; that the whole potash from one ton of coal ashes would amount to but three pounds, which may be obtained at a cost of twenty-five cents; the sulphuric acid would amount to but eighteen pounds in the ton, and would cost but about sixty-two cents. Apart from the insoluble matter the ashes would be as valuable as some of our patent fertilizers.—*AGRICOLA, in Germantown Telegraph.*

For the New England Farmer.

"SPREADING MILK."

Your New Hampshire correspondent "M." says he has a valuable heifer whose milk spreads very badly, and inquires whether there can be any remedy. I have often heard of this imperfection, and though I cannot call it a failing that should induce a farmer to dispose of a good cow, as some have done, it is surely a source of much annoyance to the milker.

There can be a remedy for this in most cases, unless there is a natural imperfection in the orifice of the teat, in which case it may possibly be outgrown. I cannot tell what may be the cause in this particular case, but I should advise our friend "M." to make an examination, if he has not already done so, and, if he can find out the cause of the difficulty, it can, most probably, be remedied. Sometimes a disagreeable spattering is caused by a scratch, or sore, on the end of the teat; this can be easily cured by a salve which almost every family keeps in the house—Redding's Russia Salve. This, by the way, I think is the best salve for family use in the country.

This spattering is also caused by a fault which the milker is prone to get into, that of leaving the cow's teats wet after milking. This seems to be but a trifling matter, but in hot, dry weather it has a tendency to dry up the teats, the orifice becomes partially filled up, and what "M." calls "spreading" of milk follows. P. PAIGE.

South Hampton, N. H., June 19, 1862.

A SMUGGLER'S TRICK.—A novel way of smuggling is reported in the French papers. A watchmaker of Alencon having lately offered some Swiss watches at exceedingly low prices, was asked how he could afford to sell them so cheap. "O, that is simple enough," he replied; "I bought them of a wild beast showman who had just come from Switzerland." Before leaving Geneva he bought a quantity of watches, which he concealed under the litter of his lions' cage. It is hardly necessary to mention that the Custom House officers at the frontier did not venture to search there for contraband goods.

NEW PUBLICATIONS.

THE ILLUSTRATED HORSE DOCTOR. Being an accurate and detailed account of the various Diseases to which the Equine Race are subjected; together with the latest Mode of Treatment, and all the requisite Prescriptions. Written in plain English, and accompanied by more than 400 pictorial Illustrations. By EDWARD MAYHEW, M. R. C. V. S. Philadelphia: J. B. Lippincott & Co., 1862. For sale by George L. Dix & Co., Boston. Price \$2.00.

A person who loves the Horse, who studies his wonderful construction and adaptation to the wants of man, and who feels a new dignity and power when he sits upon a noble charger or has a pair of mettlesome steeds in hand, can alone appreciate a good horse, or knows how very few there are worthy of the term. Few persons are aware of the difficulties they must encounter, before they can secure a horse that is of the right size, of the right temperament, one that is elegant in form and action, and capable of great endurance, if a case of necessity should arise to test his power. Unless occupied with some thought or care that is all-engrossing, we never pass a horse without giving him a critical notice, however brief that notice may be—and we sincerely believe that nine out of ten of them—both in city and country—are only remarkable for some physical defect, or some dangerous habit, alike perilous to both man and beast. They are mean, beyond description, compared with what they might be under a proper course of breeding and treatment; they are knock-kneed, have corns, splint, albugo, bots, broken wind, canker in the foot, colic, horse distemper, farcy, diabetes, curb, contraction of the foot, fistula, poll-evil, glanders, founders, heaves, mange, rheumatism, ringbone, sandcrack, roaring, get bone, bog and blood-spavin, blind staggers, stranguary and lockjaw, thrush, wind-galls and warts, and forty other diseases, that oppress and torment the poor animals a thousand times more than all the labor they ought to perform! What a frightful catalogue of diseases, to be visited upon one of the noblest animals—both in structure and disposition—which God has placed in our care, to subserve our wants or gratify our pleasures! Poor brute! Never was another so beset with evil, or treated with so much inhumanity.

There are two principal causes for all this, viz.:

1. Breeding from old and diseased animals;
2. The injudicious and harsh treatment which they receive.

It has long been a practice, and is a widespread one, to breed from aged and imperfect mares—mares that have been excellent animals, but are full of age and the imperfections that a large proportion of all horses acquire before arriving at the age of twenty years. One, for instance, has had crooked knees for ten years, another the spring halt, and another a capped-hock or the heaves. She is past serviceable labor in the field or on the road, and as the kind master

is still desirous of making her profitable to him, he turns her over in old age to the pains of parturition, and just work enough in the plow or cart to pay for her hay and grain. This is done by thousands, who never think that these defects may be entailed upon the progeny of these mares, and thus a race of ill-formed, ill-mannered and comparatively worthless horses is perpetuated. For the purpose of breeding, the young or middle-aged of both sexes should be selected—and these should be of the best form, and possessing as many of the best qualities as can be found in a single animal. When these precautions are observed, we shall have a race of young horses to start with that will produce the finest animals, under a proper course of management.

The next prolific source of poor horses, is the injudicious, harsh, and very often cruel treatment, which they receive. Colts are put to work too young; pressed to the extent of their power, both in speed and draft, too frequently; and when fatigued or heated, are left in the storm or cold, or a draft, where agues and cramps are contracted that continue with them through life. They are often urged to turn suddenly and rapidly, which strains or breaks some of the nice organism, as in the case of splint or spavin. They are hampered with unnecessary and injurious harness, such as tight check rein and blinders, which leave them with imperfect vision, and their supple limbs tied and tormented into every shape but a natural one. These are all wrong, and the book whose title we have introduced at the head of this notice, undertakes to correct these errors—and not only this, where these faults have brought their legitimate fruits in lameness and disease, it teaches us how to cure and recover, as far as judicious treatment and veterinary skill is able. It is, probably, the best book that has ever been published in relation to the horse.

For the New England Farmer.

THE BAROMETER.

There seems to be a variety of opinions about the value of this instrument to the farmer, some placing implicit reliance upon it as a weather-indicator, while some, consider its teachings so uncertain, as to be of no practical value. These differences of opinion are probably due to three causes, namely, more or less care and judgment in observing its indications, *in connection with the season, direction of wind, &c.*; difference in action of the instrument itself in different localities, and difference in expectation of what it was capable of doing before obtaining it.

From the extravagant statements of some who had tried it, many were led to believe that it would tell them, with unerring certainty, when it would rain, and when it would be fair, and that, if the barometer did not indicate rain, they could go on with haying or harvesting with impunity, in spite of every other appearance of rain, and when dis-

appointed in this, condemned the whole as a hum-bug.

I have owned one of Timby's barometers nearly two years, and for one year of that time, have observed it carefully, several times a day, and have taken every opportunity to converse with those who have tried them, including at least one sea captain, and all seem to agree that judgment and careful observation, not only of the barometer, but of other indications, are indispensable requisites in its use, and that it is much more reliable in some places, than in others, owing, I suppose, to mountains which intercept currents of air. I think it generally gives little or no indication of a north-east storm, while a storm from the south, is generally preceded by a fall of the mercury, and a thunder shower is usually indicated by a rapid sinking, frequently of half an inch or more, depending, however, some upon whether the shower is to be followed by wind. Saturday, May 31, the column in the barometer fell slightly, and rose again during the night, which, I believe, is not generally considered to indicate rain, but on Sunday afternoon we had rain enough, with south-west wind, to have interrupted haying or harvesting, the mercury falling little more than a tenth, some time after the rain commenced, a very moderate thunder shower coming on Monday, followed, however, by very warm weather and little wind. During yesterday, Tuesday, June 3d, and last night, the mercury rose nearly four-tenths, the night being quite rainy, with a prospect of a long storm ahead, wind north-east. In some instances a barometer, a few miles from here, in a much more elevated position, has indicated rain several hours sooner than mine.

But to make the story short, I conclude that in a locality like this, whoever buys a barometer trusting for fair weather when the mercury rises, and expecting rain when it falls, will so often "catch a tartar" as to better off without it; but that with the aid of considerable experience and a good stock of "gumption," it may be made quite useful. WM. F. BASSETT.

Ashfield, June 4, 1862.

A FINE RAIN.—On Friday evening, the 27th of June, at about 7 o'clock, a dark cloud commenced rising directly in the north, and soon assumed the grandest proportions. It was as black as midnight, and rose majestically towards the zenith, but gradually sweeping eastward until a new current brought it directly overhead, whence it spread in every direction, until the whole horizon was shut in by it. It gave audible notice of its coming from its appearance in the north, and as it approached and passed, the grandest and most brilliant fire-works were displayed, greatly enhanced by the rich baritone of the rolling thunder. The rain fell fast in great drops, which, with the lightning and thunder, and a lively breeze, gave the beholder a vivid manifestation of the power of Him who conducts and "rides upon the storm."

Never run into debt without a reasonable probability of solving it at the time agreed.

THE BOBOLINK.

The verses which we give below are not inappropriate at the present time, when this delightful singing bird has just arrived from his Southern quarters. They were published in one of the early numbers of the *Atlantic Monthly*, and were greatly admired by the editor, J. R. Lowell. Mr. J. J. Piper, of the *Fitchburg Revereille*, has pronounced them the best Bobolink song extant. To enter into the spirit of these verses, the reader should be familiar with some of the peculiar habits of the Bobolinks. These birds never sit still upon a branch, like other birds, while they are singing. As soon as they begin to sing, they take flight, and poise themselves upon the wing, as the English Larks are said to do, except that, as the Lark while singing is moving upwards, the Bobolink is moving in a horizontal direction. Frequently in an old orchard in the country, which is laid down to grass, there are from ten to a dozen pairs of these songsters; and the male birds, during the latter part of March and the whole of June, are constantly hovering over the field apparently in concerted action, as in an aerial dance, vieing with each other in the loudness of their notes, and the gracefulness of their quivering flight. For a full account of the musical habits of these and other native singing birds, we refer the reader to a series of five articles "On the Singing Bird and their Songs," by the author of these verses, commenced in the Second Volume of the *Atlantic Monthly*.—*Saturday Evening Gazette*.

THE O'LINCON FAMILY.

BY WILSON FLAGG.

A flock of merry singing birds were sporting in the grove,
Some were warbling cheerily, and some were making love;
There were Bobolincos, Wadolincons, Winterseebles, Conquedles;
A livelier set were never led by taber, pipe or fiddle;
Crying, "Phew, shew, Wadolincon, see, see, Bobolincon,
Down among the tickle-tops, hiding in the buttercups!
I know the saucy chap, I see his shiny cap,
Bobbing in the clover there; see, see, see!"

Up flies Bobolincon, perching on an apple-tree,
Startled by his rival's song, quickened by his raillery.
Soon he spies the rogue aloft, curveting in the air,
And merrily he turns about and warns him to beware!
" 'Tis you that would a wooing go, down among the rushes O!
But wait a week, till flowers are cherry; wait a week, and ere
you marry,
Be sure of a house wherein to tarry!
Wadolincon, Whiskodink, Tom Denny, wait, wait, wait."

Every one's a funny fellow; every one's a little mellow,
Follow, follow, follow, o'er the hill and in the hollow!
Merrily, merrily, there they hie; now they rise and now they fly;
They cross and turn, and in and out, and down in the middle
and wheel about,
With a "Phew, shew, Wadolincon! listen to me, Bobolincon!
Happy's the wooing that's speedily doing, that's speedily doing,
That's merry and over, with the bloom of the clover!
Bobolincon, Wadolincon, Winterseeble, follow, follow me!"

O, what a happy life they lead, over the hill and in the mead!
How they sing, and how they play! See, they fly, away, away!
Now they gambol o'er the clearing; off again and then appearing;
Poised aloft on quivering wing, now they soar and now they sing:
"O let us be merry and moving! O let us be happy and loving;
For when the mid-summer has come, and the grain has ripened
its ear,
The haymakers scatter our young, and we mourn for the rest of
the year!

Then Bobolincon, Wadolincon, Winterseeble, haste, haste,
away!"

For the New England Farmer.

AGOING TOO FAST.

Who is agoing too fast? Why, that hair-brained fellow, driving that carriage, and in danger of upsetting the carriage, killing himself and two girls he has with him, beside spoiling horse and carriage. This crazy fellow is not the only one who is in danger from fast driving. "Agoing too fast" is an epidemic of the age; farmers, mechanics, and those of many other occupations, are in danger, as well as that go-ahead, enterprising driver of the carriage. Though farmers are in less danger of fast driving than traders, speculators and manufacturers, yet, occasionally, we see one driving a little too fast. Peleg Go-ahead had a farm left to him by his grandfather, containing about 250 acres of intervale and other respectable land. Before his grandfather died he had been a clerk in a grocery store. Soon after he came in possession of this valuable farm he said he did not intend to plod along just as his grandfather had done, who only left fifteen or twenty thousand dollars, "but it was in him, and he meant to do something." So he commenced operations early in the spring by hiring all hands that offered their services, without much scruple about wages; and with this motley gang of colors and dialects he went ahead, driving business, plowing and sowing, reaping and mowing, to the end of the first year. Being somewhat in the habit of book-keeping, he found himself rather in the rear after paying off his hands and taxes, but determined to make it up by doing more business. The next year he made a more vigorous effort, hired more help at high wages, and astonished his neighbors to see what a business man could do. Without going into many particulars how he enjoyed himself with his span of dapple greys in riding out with his young wife, and how his variety help spent their time when he was away, be it enough to state that at the end of the third year, instead of imitating his plodding grandfather, the spirit of his grandfather had the spectacle of seeing his farm struck off under the hammer to the highest bidder for the accommodation of Peter's creditors.

Describing solitary cases of fast driving would give but a feeble view of the reality. Fast drivers may more consistently be classed in groups to represent facts. In one of our large manufacturing villages the lives of men and property wasted in hurried speculations would compare with the destruction caused by war; hundreds of men were made paupers, and not a few of them died of consumption, broken hearts and brain fevers. I do not state these remarks without some personal knowledge of the facts. That insane desire to gain property fast has been the destruction of a vast many of our enterprising business men, and has been the cause of stagnation in business and dull times, little inferior to the calamity of war; instead of getting rich they make themselves and others poor.

SILAS BROWN.

About the first of July, grasshoppers would occasionally sail in, and they would jump and catch them very quick. It soon became sport for boys to catch grasshoppers and throw them on the side of the pen, to see the minks jump and catch them. Hearing the same jumping at night, I went out to see what was going on, and I found they were catching millers. The millers were so thick about my bees, that I could catch about thirty or forty a night in a pan of buttermilk, and now I have no millers about my bees. My minks cannot climb a rough board fence four feet high. They have young once a year—from five to eleven—and before I take off their pelts, I keep them in the dark for about one month, to make them darker than the wild ones.

CULTIVATION OF CLOVER FOR FODDER.

Farmers who have kept, and themselves fed, a variety of stock, sheep, horses, oxen and cows, both dry and in milk, are pretty much of one opinion, we believe, as to the value of clover hay for such stock, viz:—*that when it is well grown and properly secured, it is more valuable than any other hay.* Such, certainly, is our opinion, after having fed it extensively, and particularly to sheep. In a recent conversation with Mr. JOHN DAY, of Boxford, who cuts large quantities of clover, he stated that he feeds most of his clover hay to cows giving milk, and he has noticed that when the clover is exhausted, and herdsgrass and red-top are supplied, twenty cows immediately shrink two cans of milk per day! We have heard similar statements from other observing farmers. If, then, clover hay is so excellent for producing milk, it must also be good for making flesh, and especially excellent in promoting the growth of young stock.

Our object in this writing is to learn the opinions of brother farmers,

1. As to the best kind of clover for New England farms?
2. What is the best mode of producing it?
3. How should it be cured and packed away?
4. Is there any way in which a fair crop can be taken, annually, from land devoted to orcharding?

These questions are asked, in the hope that many of our intelligent correspondents will reply to them in articles for publication, as many persons are desirous to engage more extensively than they have ever done, in the cultivation of clover.

The question as to the best manner of cultivating orchards, is a perplexing one. All the processes, the plowing, furrowing, cultivating, and removing the crops, are dangerous ones to the trees, and the expense of the labor is materially increased by the impediments which the trees offer. If there is any way in which a crop of clover could be taken off annually without frequent plowing,

MINKS AS INSECT-CATCHERS.—A correspondent of the *Rural New-Yorker*, who seems to make a business of raising minks for their fur, relates the following in regard to their catching grasshoppers and bee-moths: Two years ago last May, I caught seven young minks. I made a pen of boards near my bees, twelve feet square, and put them in it.

it seems to us that with a top-dressing of compost each year, in the autumn, or, perhaps, once in two years, the trees would be abundantly sustained by the aid of the dressing and that drawn from the constantly decaying roots of the clover plants. Can it be done?

Under such a course could not the specific manures, such as plaster, guano and superphosphate of lime, be used more advantageously, even, than on our corn and potato crops? Clover plants do not sward over and bind the surface of the soil as do herdsgrass, red top, and some other grasses,—and, therefore, the action of the atmosphere and the rains would be much quicker upon the soil than it is where these grasses prevail—and this would be favorable to the trees. We hope to hear from those who have had experience in these matters, or who will offer opinions upon them.

For the New England Farmer.

A WONDERFUL DISCOVERY.

This is an age of discovery, invention, and I believe, of progress. In almost every department of knowledge, science, and art, discoveries of vast importance have been made, which were never dreamed of in the philosophy of the ancients. Scarcely a daily public journal is issued which does not contain news of a sudden and remarkable addition to the stock of human knowledge; or, that somebody has done, or is going to do, some astonishing thing. But the reader, if he “takes the papers,” knows all this and a great deal more, hence a longer prelude is unnecessary. I will come at once to the point, and tell him something which he (possibly) does not know.

A very important discovery has recently been made in the realm of science—the science of law, or jurisprudence. What can it be? says one. Have they discovered that *might is right*, or that law and justice should *not* go hand in hand? The following facts will show that this guessing comes very near the truth.

A few months ago, the *savans*, or rather the officials of the Fitchburg Railroad Co., discovered that the corporation were not obliged by law to build, or keep in repair fences on the line of their railroad; or to pay damages for killing a stray animal of any kind; and, furthermore, that whoever is unfortunate enough to have a horse, ox, or cow slaughtered upon their track, is liable to a fine of twenty dollars; and if, by the collision, the train is thrown from the track and smashed up generally, the owner of the animal which caused the obstruction, must pay all the damages to cars and wounded passengers, even if it takes the whole of his property to foot the bill!

The company have taken this stand not because there is an express law which exempts them from building, repairing fences, and paying damages, but upon the ground that there is an *absence* of any law compelling them thus to do.

There is a section in the statutes of Massachusetts which says that all companies which have built railroads since the year 1846, shall build and keep in repair lawful fences upon both sides of the

track and pay to the owners the full value of cattle which have broken through the fence and been injured or killed.

As the Fitchburg railroad was built previous to that year, the company have decided that they are exempt from the law, and in accordance with this decision have issued circulars to the landholders upon the line of their railroad, to the above effect. A friend of mine who owns land upon this road, recently had a valuable cow killed upon the track in consequence of a defect in the fence. He went to the president of the road expecting to receive the value of the animal, but was told, that as the company had adopted this new measure, he could not make up the loss. He went to an able lawyer, but was advised not to prosecute the company, for the law was against him. So the matter stands. Why this sharp-sighted and *over-bearing* company did not make this discovery sooner, and apply it to practice, is one of the wonders of the age. When the land was purchased for the construction of the road, the owners sold it to the company with the express understanding that the company should build and maintain the fences, pay damages, &c.; but a very few wise old heads ferring there might be a loophole of escape, had an express provision, with regard to the fences, made in the deeds which they gave.

This provision, the knowing ones say, cannot be dodged. I do not believe that there is a jury of fair-minded impartial men in the State who would sustain the Fitchburg company or any other, in the course they have taken. It is not only mean, but wicked and abominable. It is hoped that a united effort will be made during the sitting of the next Legislature, to have the law, which obliges railroad companies that have been formed, or have built railroads since 1846, to build and keep in repair fences, &c., so modified as to include *all* rail-roads built previous to that time.

South Groton, June, 1862. S. L. WHITE.

P. S. Since writing the above, I have been informed that the charters of the railroad companies which were formed previous to the year 1846, exempt the companies from building and maintaining fences; and that these charters cannot be altered. If this is the fact, it may be that the *goodness* of the Fitchburg Railroad Co., and not their ignorance, has caused them to fence their road, and pay damages. “Praise to whom praise is due.”

S. L. W.

STODDARD'S HORSE RAKE.—We are daily receiving inquiries by letter and otherwise, to learn where this rake can be obtained. In a letter from Mr. STODDARD, the inventor, dated June 18, he says that “Messrs. J. W. GREEN & Co., of New Braintree, Mass., are manufacturing it and have the control of it for the present.”

It is on sale by Messrs. PARKER, GANNETT & OSGOOD, 47 Blackstone Street, Boston.

CRIBBING HORSES.—Hitch the horse in the middle of the floor, and high up, so that he cannot bite any thing, till he forgets this habit, which will not require many days to accomplish. He should be fed from a basket hung on his head during the time.—*Rural New-Yorker.*

THE AGE OF OUR EARTH.

We extract the following from Agassiz's article on "Methods of Study in Natural History," in the May number of the *Atlantic Monthly* :

Among the astounding discoveries of modern science, is that of the immense periods which have passed in the gradual formation of our earth. So vast were the cycles of time preceding even the appearance of man on the surface of our globe, that our own period seems as yesterday when compared with the epochs that have gone before it. Had we only the evidence of the deposits of rocks heaped above each other in regular strata, by the slow accumulation of materials, they alone would convince us of the long and slow maturing of God's work on the earth, but when we add to these the successive populations of whose life this world has been the theatre, and whose remains are hidden in the rocks into which the mud or sand, or soil of whatever kind on which they lived, has hardened in the course of time—or the enormous chains of mountains whose upheaval divided these periods of quiet accumulation by great convulsions—or the changes of a different nature in the configuration of our globe, as the sinking of lands beneath the ocean, or the gradual rising of continents and islands above it—or the wearing of great river beds, or the filling of extensive water basins, till marshes first, and then dry land succeeded to inland seas—of the slow growth of coral reefs, those wonderful sea-walls raised by the little ocean-architects whose own bodies furnish both the building stones and the cement that binds them together, and who have worked so busily during the long centuries, that there are extensive countries, mountain chains, islands, and long lines of coast consisting solely of their remains—or the countless forests that must have grown up, flourished, died and decayed to fill the storehouses of coal that feed the fires of the human race to-day—if we consider all these records of the past, the intellect fails to grasp a chronology for which our experience furnishes no data, and the time that lies behind us, seems as much an eternity to our conception as the future that stretches indefinitely before us.

PLEASANT NEIGHBORS.

One's pleasure, after all, is much affected by the quality of one's neighbor, even though one may not be on speaking terms with them. A pleasant, bright face at the window is surely better than a discontented, cross one ; and a house that has the air of being inhabited is preferable to closed shutters and unsocial blinds, excluding every ray of sunlight and sympathy. We like to see glancing, cheerful lights through the windows of a cold night, or watch them, as evening deepens, gradually creep from the parlor to the upper stories of the houses near us. We like to watch the little children go in and out the door, to play or go to school. We like to see a white-robed baby dancing up and down at the window, in its mother's arms, or the father reading his newspaper there at evening, or any of those cheerful impromptu home glimpses, which, though we are no Paul Pry, we will assert make a pleasant neighborhood to those who live for comfort instead of show. Sad, indeed, some morning on waking, it is to see the

blinds down and the shutters closed, and know that death's angel, while it spared our threshold, has crossed that of our cheerful neighbor—sad to miss the white-robed baby from the window, and see the little coffin at nightfall borne into the house—sad to see innocent little faces pressed at eventide against the window-pane, watching for the "dear papa" who has gone to his long home.

For the New England Farmer.

SALT FOR ROSES.

Being in the vicinity of the United Society of Shakers, at New Lebanon, N. Y., a few days since, I called, as is my custom, to see their fine gardens, learn something new, and enjoy an hour of agreeable chat with my friends there.

In the garden, cultivated by George Curtis, I discovered a large plot of roses just bursting into beauty and fragrance. The leaves upon these bushes were as fresh and as fair as though they had been spread in Eden, before any insects had been sent to blight the beautiful of our world. As the rose bush pest was then in the midst of its harvest in other gardens, I inquired of my friend Curtis how he escaped their visit. By giving the ground salt, he replied, and that since he has done it, he has not been visited by the pest. This salt he sows among the bushes in early spring, and the probability is that it destroys the egg of the insect while in the ground.

He obtains refuse salt for garden purposes, such as for roses, asparagus, &c., and deals it out liberally. Its application, however, should not come so near to pears or apple trees as to affect them.

Friend Curtis is very nice in all his garden operations, and among other things, he is experimenting carefully and liberally with the grape, several new varieties of which he has now in a state of flattering progress. His favorite seedling has now been in bearing some four years, and each year gives new testimony in favor of its excellent qualities. Last year, although it suffered much from a late frost, it was ripe September 20. The vine is a very heavy bearer. He is slow in commending it to the public, choosing thoroughly to test it on his own grounds before he submits it to the animadversion of critics, or the scandal of grape-mongers. He has other seedlings that promise well, whose further developments he is anxiously watching.

In this garden stands the original vine of the "Northern Muscadine," that has survived so much censure, and is now gradually gaining favor in the good graces of amateurs;—a beautiful vine, whose bruising has only added to the fragrance of its fruit and reputation.

Throughout this society I find abundant efforts making in grape culture, and a success attending them, which shows that we of the North, by a little labor, may sit under our own vines and eat the fruit thereof. Patient labor and unshaken perseverance with them, have, to a good extent, overcome the severity of our climate, and they are in the yearly receipt of liberal reward.

STRAWBERRIES.

Friend Curtis showed me a bed of strawberries two years from the seed. A very curious appearance this strawberry bed presented. Leaves and

fruit, of all sorts and sizes. I saw several stems with fruit well worth cultivating, and from one root he handed me, fruit which was famous in size, and possessed in an eminent degree the peculiar flavor and richness of the field or native fruit. He has also a plantation of the Peabody, which were cultivated in hills, and were well laden with noble fruit.

THE SCHOOL-ROOM.

An invitation was proffered to visit the school, at this season kept for the benefit of the younger sisters in the community, but time would not allow me to indulge in this pleasure. I hope at a future time to do so, as I am of the opinion, from the general intelligence and noble deportment of George's boys, that progressive education with them is a fixed fact. They have introduced Harper's series of readers, by Willson, into their school, which is evidence that they know what the best is, and mean to make it available. W. BACON.

Richmond, June 24, 1862.

THE HAYFIELD.

What man amongst us all, if he will think the matter over calmly and fairly, can honestly say that there is any one spot on the earth's surface in which he has enjoyed so much real, wholesome, happy life as in a hayfield? He may have won renown on horseback or on foot at the sports and pastimes in which Englishmen glory; he may have shaken off all rivals, time after time, across the vales of Aylesbury, or of Berks, or any other of our famous hunting counties; he may have stalked the oldest and shyest buck in Scotch forest, and killed the biggest salmon of the year in the Tweed, and trout in the Thames; he may have made topping averages in first-rate matches of cricket; or have made long and perilous marches, dear to memory, over boggy moor, or mountain or glacier; he may have successfully attended many breakfast-parties within drive of May Fair, on velvet lawns, surrounded by all the fairy land of pomp and beauty and luxury which London can pour out; he may have shone at private theatricals and at-homes, his voice may have sounded over hushed audiences at St. Stephen's or in the law courts; or he may have had good times in any other scenes of pleasure or triumph open to Englishmen; but I much doubt whether, on putting his recollections fairly and quietly together, he would not say at last that the fresh-mown hayfield is the place where he has spent the most hours which he would like to live over again, the fewest which he would wish to forget.

As children, we stumble about the new-mown hay, revelling in the many colors of the prostrate grass and wild flowers, and in the power of tumbling where we please without hurting ourselves; as small boys, we pelt one another, and the village schoolgirls, and our nursemaids, and young-lady cousins, with the hay, till, hot and weary, we retire to tea or syllabub beneath the shade of some great oak or elm standing up like a monarch of the fair pasture; or, following the mowers, we rush with eagerness on the treasures disclosed by the scythe stroke—the nest of the unhappy late-laying titlark, or careless fieldmouse; as big boys, we toil ambitiously with the spare forks and rakes, or climb into the wagons and receive with open arms

the delicious load as it is pitched up from below, and rises higher and higher as we pass along the long lines of haycocks; a year or two later, we are strolling there with our first sweethearts, our souls and tongues loaded with sweet thoughts and soft speeches; we take a turn with the scythe as the bronzed mowers lie in the shade for their short rest, and willingly pay our footing for the feat. Again, we come back with book in pocket, and our children tumbling about as we did before them; now romping with them, and smothering them with the sweet-smelling load—now musing and reading and dozing away the delicious summer evenings. And so shall we not come back to the end, enjoying as grandfather the love-making and the romping of younger generations yet?

Were any of us ever really disappointed or melancholy in a hayfield? Did we ever lie fairly back on a haycock and look up into the blue sky, and listen to the merry sounds, the whetting of scythes and the laughing prattle of women and children, and think evil thoughts of the world or our brethren? Not we! or, if we have so done, we ought to be ashamed of ourselves, and deserve never to be out of town again during hay harvest.

There is something in the sights and sounds of a hayfield which seems to touch the same chord in one as Lowell's lines in the "Lay of Sir Launfal," which ends—

"For a cap and bells our lives we pay;
We wear our lives with toiling and tasking;
It is only Heaven that is given away;
It is only God may be had for the asking.
There is no price set on the lavish summer,
And June may be had by the poorest comer."

But the philosophy of the hayfield remains to be written. Let us hope that whoever takes the subject in hand will not dissipate all its sweetness in the process of the inquiry wherein the charm lies. —*Tom Brown at Oxford.*

SULPHUR FOR MILDEW.—Sulphur is a cure for most forms of fungus or mildew, if applied in time. The cracking of the pear is undoubtedly caused by a fungus, and I have great hopes that it will check this great drawback to the culture of the Virgalieu pear. The difficulty is to apply it so that the fruit shall be dusted over with the sulphur. Syringing the trees with a solution of sulphur is probably the best method. By boiling for some time lime and excess of sulphur together in water, we get penta sulphuret of calcium—a compound containing about eighty per cent. of sulphur. If this is largely diluted with water, and the trees are syringed with it, as the water evaporates the sulphur will be left on the leaves and fruit. I have great faith in this plan, and mean to try it thoroughly. I boiled eight pounds of sulphur and one of lime for several hours. I then poured off the clear liquid and added another pound of lime to the sulphur left at the bottom and boiled again. —*Genesee Farmer.*

MULCH THE TOMATOES.—The *Gardener's Monthly* says:—"Tomatoes do best when suffered to grow flat on the ground; but in such cases the soil should be covered with a mulch of straw or litter to keep the tomatoes from getting soiled and rotten by dampness. Brushwood is an excellent material for them to lie on and they seem to thrive well with it about them."

For the New England Farmer.

NOTES FROM THE MONOMACK.

BY SAGGAHEW.

HINTS FOR NURSERYMEN.—It is quite common among nurserymen, in cases where they receive orders for any variety of tree, shrub or plant they happen to be out of, to "substitute" some kind that they have. If, for instance, a customer orders the Doyenne d'Ete and Easter Beurre pear trees, they send him the Brandywine and the Epine Dumas. (This was actually done the last spring by one of our most distinguished and "reliable" nurserymen.) Now is there a single *honest* reason for so doing? We think not. It is not a good *excuse*, even, to say that they send the customer "something as near as they can" to the article ordered, unless the customer expressly allows them that liberty. In the case above mentioned, customers wanted those particular kinds, and no others, and it was a perplexity, and a pecuniary loss to the agent through whom the order was sent. The latter did not recognize any obligation, either express or implied, on the part of the customers, to take what they did not order and did not want, and he was obliged to sell the surplus as best he could, and re-order of another party. What would be thought of the merchant who should venture to adopt such a practice in his business? We think he would soon find it "a hard road to trammel," and deservedly so. If all customers hold the opinions of the writer, those nurserymen who continue this bad practice will in time find a falling off in their annual orders.

There is also need of a revision in the prices which some of our nurserymen charge their customers for *packing* goods ordered. We admit that, in most cases, a charge should be made, but we can think of no good reason why a customer should be asked to pay more than a fair price for the material used, and the labor spent in doing it. At prices in several cases charged the writer, any common laborer, with a little practice, could easily earn \$20 per day in packing, after allowing fair prices for all materials used. A customer ought not to be charged for taking up and collecting the articles ordered, because the catalogue price, or price agreed upon, covers this, by common consent. If the nursery happens to cover a large extent of territory, or is cut up into lots more or less distant from each other, it is no fault of the customer, and he will be justified if he declines to pay for such disadvantages under the plea of "charges for packing."

CUTTING BACK NEWLY TRANSPLANTED TREES AND VINES.—It not unfrequently happens that a tree, or vine, does not start well after it is set out. It even refuses to start at all, and begins to "die down" from the extremities, towards the roots. If let alone, it will probably be entirely dead before the summer is over. Sometimes a tree starts quite feebly, and it seems doubtful if it will muster vitality enough to keep it alive. In these cases, also, if let alone, the chances are that death will be the result. A large majority of such trees can be saved, by simply cutting them back. The writer has saved several such the present season. In some cases, a severe shortening-in of all the branches was sufficient, in others it was found necessary to cut the whole tree back nearly to the

ground. By so doing, the remaining vitality is allowed to expend its whole force upon a few buds, which push with vigor, and soon sufficient foliage is secured to save the tree. Where a tree starts at first, but afterwards falters, or where it fails to develop foliage and yet the limbs appear to be quite fresh, a severe cutting back will in most cases be successful, even if performed as late as July or August. This is particularly the case with pear trees and grape vines.

KILLING RATS---A NOVEL TRAP.

The premises of a good many farmers are often infested with rats, and we are often asked for modes of destruction. A resident of Brooklyn is vexed with an increasing family of rats that seem to grow fat on arsenic and rat-exterminators. He doesn't like rats, and refers his case to the *Sunday Times*. That journal recommends a trap made as follows:

"Take a mackerel barrel, for instance, and fill it to about one-third its height with water. Then place a log endwise in the water, so that one end of it will just remain above the surface. Make the head of the barrel a little too small to fit, and suspend it by two pins to the inside of the top of the barrel, so it will hang as if on a pivot and easily tip by touching either side. On this head, thus suspended, secure a piece of savory meat. The first rat that scents it, will, to get the meat, leap on the barrel head. The head will tip, or tilt, and precipitate him into the water, and resume its former position. The rat in the water will swim to the log, get on the end of it, and squeal vociferously. His cries will bring other rats, all of whom will be tilted into the water, and all of whom will fight for the only dry spot in it—viz., the end of the log. As only one rat can hold it, the victor will drown all the rest, and can, in the morning be drowned himself. We have seen twenty rats caught in one night by such a trick.

DISINFECTING AGENTS.

Now that the warm weather is upon us, our citizens should thoroughly cleanse their premises, rendering them as pure and healthy as possible. We are convinced that a great portion of the disease so prevalent during the hot months in summer, is attributable to the accumulation of filth in alleys and yards. There are a number of disinfecting agents which will be found efficacious in removing offensive smells from damp, mouldy cellars, yards, pools of stagnant water, decaying vegetable matter, &c. Either of the following will answer the purpose, while they cost but a trifle:

1. One pint of the liquor of chloride of zinc, in one pailful of water, and one pound of chloride of lime in another pailful of water. This is perhaps the most effective of anything that can be used, and when thrown upon decayed vegetable matter of any description, will effectually destroy all offensive odors.

2. Three or four pounds of sulphate of iron (copperas) dissolved in a pailful of water will, in many cases, be sufficient to remove all offensive odors.

3. Chloride of lime is better to scatter about in damp places, in yards and damp cellars, and upon heaps of filth.—*Scientific American*.

LOSS OF MANURE---FILTRATIONS.

A correspondent who has read with great attention and interest our articles on Improvement in Farming, asks, "If the soil is well pulverized to the depth of two feet, so that water can pass freely through, and below this there are drains ready to carry off all the water not held by the soil, will not the soluble parts of the manure applied near the surface, and the soluble and the richest portions of the soil, be carried off by these drains and lost to the farmer and the crops?" This is a very natural and sensible inquiry, and shows that the inquirer is one of those thinking men who is not willing to adopt any plan without a full understanding of its effects. On this point, however, there is no danger, for the water running from pipes will be found clear and pure, no matter how much or what may be the nature of the manure applied. Even liquid manure may be given in large quantities, and the water that filters through will be found clear and pure. Soak the soil with the dark brown drainings of the barn-yard, and that which passes through to the drains will be as clear as though just taken from the spring. Any one can test this matter for himself in a small way, so that the question may be settled in his own mind beyond question.

Among a series of experiments instituted by Professor Way and H. S. Thompson, for the purpose of ascertaining the power of soil to retain, unimpaired in value, manures applied in winter, and also its power to hold *in suspension* the fixed ammonia in barn-yard tanks and manure heaps, we learn that Mr. Thompson filtered through sandy loam, six inches in depth, ten grains of sulphate of ammonia and ten grains of sesqui-carbonate of ammonia, both dissolved in distilled water—the one representing the ammoniacal matter of the tank fixed by gypsum or sulphuric acid, and the other the free ammoniacal solutions of the decomposed vegetable-matter of the barn-yard—and he found that after passing through this thin stratum of soil, only 2.4 grains of the sulphate of ammonia resulted in the one case, and only 1.3 grains in the other. When an *eight-inch stratum of the soil was used, the whole of the ammonia was retained.*

Professor Way subjected stinking tank water to filtration through twenty-four inches of a light loam, and the moisture at the foot of the tube was perfectly free from smell, and a mixture of this soil and white sand allowed the percolation of water through it quite clear and free from ammonia. With the drainage of a London sewer, Professor W. found that the ammonia is separated from the rest of the organic matter to the last fraction; the phosphoric acid is separated from its base, and so is part of the sulphuric acid and all the potash; so that in fact *the soil had selected and retained* those very principles of the sewer water which science has decided to be the most valuable for the purposes of manure.

Professor Mapes, in an article on this subject, says—"It is impossible for manures in a fluid form to filter downward through any fertile soil. Even the brown liquor of the barn-yard will have all its available constituents abstracted by the soil, before it descends into the earth thirty-four inches. If this were not true, our wells would long since have become useless, the earth's surface would

have become barren, and the raw materials of which plants are made, which come from the earth's surface and surrounding atmosphere, would have passed towards the earth's centre; but the carbon and alumina of the soil, each of which has the power of absorbing and retaining the necessary food of plants, are agents for carrying into effect the laws of nature for the protection of vegetable growth."

It is only in the most porous soils, containing a good deal of gravel, that the manure will be washed down out of the reach of the roots of plants, and we venture the assertion that in no fertile, and in fact in no soil that the farmer is expected to cultivate, may loss be apprehended from this cause.

MANUFACTURE OF CARPETS.

Within a comparatively few years past, several improved kinds of carpet fabrics have been manufactured and come into extensive use. Among these is the well known tapestry, which has been brought to great perfection. The peculiarity of this fabric is the unlimited number of shades or colors that can be introduced so, that the most elaborately-colored designs, with flowers and scrolls, can be executed. The saving of worsted is also very important in an economical point of view. The appearance is the same, or similar, to Brussels carpet, but the manufacture is more simple, each thread being colored separately at spaces, with the various shades, as they follow each other in the design. The process by which this is accomplished is beautifully simple and ingenious, but requires much care in placing and arranging the threads and putting them on the beam, or the work will be imperfect. The patent Axminster is another kind—the design of this manufacture being to give the beautiful appearance of Axminster, or Tournay, at less cost. It has been very successfully and extensively applied to the manufacture of rugs, as well as carpets. Another description of carpets, having the same appearance of Brussels, or tapestry, is also now much in use. This kind is woven plain by steam power, and is afterward printed by the same agency.

HOW TO CLARIFY QUILLS.—Cut off the small top of the quill, tie them *loosely* in bundles, fix them nearly upright in a sauce-pan of water, in which a small piece of alum has been dissolved—about the size of a walnut of alum, to a quart of water; let them boil slowly, until they become clear; add a little tumeric, or a small pinch of saffron to the water, to give them the yellow color; dry them in the sun. You should tie paper round the feather part of the quills, to keep them from dust. You can increase the quantity of alum, according as you wish the quills more or less brittle. —*Irish Farmer's Gazette.*

WHEAT IN OHIO.—The editor of the Springfield Ohio *Daily News*, who has been taking "fine carriage rides into the interior," says, "the soil is mostly a stiff, cold clay, but we *never saw* wheat look stouter and more thrifty. The stalks can hardly hold the weight of the grain in the heads. All other crops are also promising, and of fruit there will be an enormous supply."

"AT THE LAST."

This beautiful poetry appeared, originally, in the *Independent*, written upon the passage, "Man goeth forth unto his work, and to his labor, until the evening."

The stream is calmest when it nears the tide,
And flowers are sweetest at the eventide,
And birds most musical at the close of day,
And saints divinest when they pass away.

Morning is lovely, but a holier charm
Lies folded close in Evening's robe of balm;
And weary man must ever love her best,
For Morning calls to toil, but night to rest.

She comes from Heaven, and on her wings doth bear
A holy fragrance, like the breath of prayer;
Footsteps of angels follow in her trace,
To shut the weary eyes of Day in peace.

All things are hushed before her, as she throws
O'er earth and sky her mantle of repose:
There is a calm, a beauty, and a power
That Morning knows not, in the evening hour

"Until the evening" we must weep and toil,
Plow life's stern furrow, dig the weedy soil,
Tread with sad feet our rough and thorny way,
And bear the heat and burden of the day.

O! when our sun is setting may we glide,
Like Summer evening, down the golden tide,
And leave behind us, as we pass away,
Sweet, starry twilight round our sleeping clay!

LAMPAS IN HORSES.

This is an *imaginary* disease, but one commonly believed in by grooms, and we are sorry to add, by a great many well informed persons. If a young horse refuses to eat, it is usually imputed to the *lampas*, which is said to be a swelling of the roof of the mouth back of the upper front teeth, to such a degree that the animal cannot chew its food. Then the awful remedy is presented, of burning the part with a red-hot iron! and in many instances the cruel suggestion is put in force with inhuman indifference and haste. This terrible torture is often inflicted without the slightest reference to the condition of the horse in other respects—to the manner in which he has been fed—what work he has been doing—or what exposure he has experienced. No effort is made to learn whether he has taken cold, and is feverish, has eaten or drank heartily immediately after a lively drive, or whether there are symptoms of colic, or some injury has taken place to the mouth or the jaws. No. It is *lampas*, and the red-hot iron must be applied—nothing else will do.

Truly, the lot of the horse is a hard one, and if we can do anything to alleviate it, to arouse men to a more merciful consideration of the noble animal, we shall certainly feel happier every time we see one.

Last week we noticed a new book upon the horse, by EDWARD MAYHEW, and expressed the opinion that it is the best work, probably, ever written upon the subject. Since that expression was made, we have given the book still more careful attention, and find abundant reasons for the

belief then expressed. Below, we copy a portion of what the writer says in regard to the *imaginary* disease of lampas in horses.

That affection is supposed to consist of inflammation, which enlarges the bars of the palate and forces them to the level of or a little below the biting edges of the upper incisor teeth.

Would the groom take the trouble to examine the mouths of other young horses which "eat all before them," the "lampas" would be ascertained to be natural development; but the ignorant always act upon faith, and never proceed on inquiry. Young horses alone are supposed to be subject to "lampas;" young horses have not finished teething till the fifth year. Horses are "broken" during colthood; they are always placed in stables and forced to masticate dry, artificial food before all their teeth are cut; shedding the primary molars is especially painful; of course, during such a process, the animal endeavors to feed as little as possible. A refusal to eat is the groom's strongest proof that lampas is present. But, putting the teeth on one side, would it be surprising if a change of food and a total change of habit in a young creature were occasionally attended with temporary loss of appetite? Is "lampas" necessary to account for so very probable a consequence? The writer has often tried to explain this to stable servants; but the very ignorant are generally the very prejudiced. While the author has been talking, the groom has been smiling; looking most provokingly knowing, and every now and then shaking his head, as much as to say, "Ah, my lad, you can't gammon me!"

Young horses are taken from the field to the stable, from juicy grass to dry fodder, from natural exercise to constrained stagnation. Is it so very astonishing if, under such a total change of life, the digestion becomes sometimes deranged before the system is altogether adapted to its new situation? Is it matter for alarm should the appetite occasionally fail? But grooms, like most of their class, regard eating as the only proof of health. They have no confidence in abstinence; they cannot comprehend any loss of appetite; they love to see the "beards wagging," and reckon the state of body by the amount of provision consumed.

The prejudices of ignorance are subjects for pity: the slothfulness of the better educated merits reprobation. The groom always gets the master's sanction before he takes a horse to be cruelly tortured for an imaginary disease. Into the hands of the proprietor has a Higher Power intrusted the life of his creature; and surely there shall be demanded a strict account of his stewardship. It can be no excuse for permitting the living sensation to be abused, that a groom asked and the master willingly left his duties to another. Man has no business to collect breathing life about him and then to neglect it. Every human being who has a servant, a beast or a bird about his homestead, has no right to rest content with the assertions of his dependents. For every benefit he is bound to confer some kindness. His liberality should testify to his superiority; but he obviously betrays his trust and abuses the blessings of Providence when he permits the welfare of the creatures dependent on him, to be controlled by any judgment but his own.

The author will not describe the mode of firing for lampas. It is sufficient here to inform the reader that the operation consists in burning away the groom's imaginary prominences upon the palate. The living and feeling substance within a sensitive and timid animal's mouth is actually consumed by fire. He, however, who plays with such tools as red-hot irons cannot say, "thus far shalt thou go." He loses all command when the fearful instrument touches the living flesh; the palate has been burnt away, and the admirable service performed by the bars, that of retaining the food during mastication, destroyed. The bone beneath the palate has been injured; much time and much money have been wasted to remedy the consequence of a needless barbarity, and, after all, the horse has been left a confirmed "wheeler." The animal's sense being confused, and its brain agitated by the agony, the lower jaw has closed spasmodically upon the red-hot iron; and the teeth have seized with the tenacity of madness upon the heated metal.

When the lampas is reported to you, refuse to sanction so terrible a remedy; order the horse a little rest, and cooling or soft food. In short, only pursue those measures which the employment of the farrier's cure would have rendered imperative, and, in far less time than the groom's proposition would have occupied, the horse will be quite well, and once more fit for service.

"NO MONEY ABOUT THE HOUSE."

There is probably no one class of citizens in our State so completely "flat broke," as it regards money, as are the "Cultivators of the Soil;" and yet they are at the same time the most "independent" and the most "wealthy."

A person unacquainted with the singular and unwise management of the great majority of farmers, would suppose they were all as poor as a "church-mouse;" and no doubt there are many that are *really* poor by reason of misfortunes, and some, also, (from a shiftless management,) deserve to be poor, because they abuse their blessings.

There are hundreds of farmers that are ever speaking of "hard times," "of low prices of grain," of the "ruin of the farmers," that there is "no money," etc.; and it is a notorious fact, *they do not have money*, but run in debt for every necessary of life, go miserably dressed, themselves and children in many cases wanting the comforts of life; the wife, even, never touching a dime of money, suffering for many needed and deserved comforts, and yet "No Money in the House!"

We have seen their daughters going barefoot; and yet with all these "signs of poverty," the same farmer would have 500, 1000, 1500, perhaps 2000 bags of wheat in the granary, "waiting a rise," while his family and himself wanted the comforts and necessities of life. The wife, too, who has toiled all the season, often beyond her strength, hoping "harvest-time" would bring comfort and ease; alas! poor woman! the "Grain is not sold," and you and the storekeeper must wait, children go barefoot, the smile leaving your brow, and probably some creditor, tired of waiting, will, Shylock-like, strip the farm and homestead, and leave you all to the cold pity of an unfeeling world. And this because of that shiftless, miserable, wicked plan of holding on to the crop, which should

always be sold to pay the debts incurred while maturing it.

If our farmers would adopt the *Cash System*, and buy and sell only for cash, they would find that in a little time joy would be in the household, and their own joy would prove to them that they had discovered Aladdin's Lamp.—*Exchange.*

EXTRACTS AND REPLIES.

MANNY'S MOWER.

A statement made by Horace Ware of Marblehead, of work done on his farm in the ordinary way, in the season of 1856, by *Manny's Mowing Machine*.

1856.—	June	24,	1½	acres,	2	hours,	3	tons	per	acre.
	"	30,	5	"	4½	"	2	"		
	July	1,	8	"	7	"	1½	"		
	"	2,	8	"	7½	"	1	"		
	"	7,	10	"	10	"	2	to	3	"
	"	8,	6	"	4½	"	1	to	2	"
	"	9,	6	"	4	"	2	"		
	"	10,	4	"	3½	"	1	to	3	"
	"	14,	4½	"	1	"	1	to	3	"
	"	16,	5½	"	3	"	1	to	2	"
	"	18,	2	"	1½	"	1	"		
	"	19,	5	"	4	"	2	"		
	"	21,	10	"	9	"	1	to	2	"
	"	22,	7	"	7	"	1	to	2½	"
	"	23,	5	"	4	"	½	to	2	"
	"	25,	1½	"	1½	"	½	to	2	"
	Sept.	15,	4	"	2½	"	½	"		

Total, 93 acres. 76½ hours.

Average of time, less than one hour to the acre.

H. WARE.

I find the foregoing data among my papers. I remember to have viewed the ground as one of a committee on mowing machines. I have entire confidence that it is correct. I think it goes to show very clearly the utility of such implements. There may be other machines, which will do better, but I have not seen them.

July 1, 1862.

J. W. PROCTOR.

MUCK AND ASHES.

In the *Farmer* of May 21st some unknown friend makes some statements in regard to my farming. I think he must have misunderstood me in some things, for instance, I do *not* consider leached ashes worth much. In reply to W. J. Pettee, I would say that I have experimented with muck and ashes for more than twenty years. I have tried it in the same field with stable manure—half the field manured with six bushels of ashes (or 36 lbs. of potash) to a cord of muck, and the other half with stable manure, and all the crops were the best where the muck and ashes were applied. The muck was thrown out of the meadow in the autumn, and the ashes mixed with it about ten days before using.

JOHN DAY.

Boxford, June 23, 1862.

THREE SPANISH MERINO BUCKS.

Messrs. C. C. Smith and J. G. Fitts, of Corinth, Vt., own three full blood Spanish Merino Bucks, which sheared as follows:—One two years old, *twenty-two* pounds; next, two years old, *eighteen* pounds, and the third, one year old *seventeen* pounds! Is not that a good CLIP?

REMARKS.—Yes. The Vermonters beat all creation in fine horses and great "clips" of wool.—There is no "great cry" and "little wool" in their affairs.

KICKING COWS.

I have noticed several receipts in your monthly for preventing cows from kicking, some of which may be good, but most of which are worthless, in my humble opinion. If a cow is of a quiet, gentle disposition, she will not kick if she is well used, unless she has sore tits, or the milker's nails are too long, or there is some other irritative cause for it. But if a cow, through a vicious disposition or constant bad treatment, once gets in the habit of kicking, there is but one *sure* remedy for it, and that is the trick the Yankee learned the Indian, viz: cut her tail off close behind her ears!

A. J. ALDRICH.

North Blackstone, June, 1862.

LARGE FLEECES.

I saw a fleece of wool from one sheep the other day that weighed 29½ lbs. I have heard of one in Dorset, Vt., that weighed 33 lbs. I don't know as these figures are very uncommon, but it struck me they were.

There is a great drought here, and crops are nowhere.

HENRY O. WILEY.

North Granville, N. Y., June, 1862.

For the New England Farmer.

THE GRASS CROPS.

It seems to be the opinion of the best experienced observers whom I have met, for the month past, that there will be a small crop of grass, the present season. They reason in this manner, that during the winter and early spring, there was much less rain than usual, that many spots were winter killed, as it is called, by the long continuance and close adherence of snow and ice to the surface. Although the fields have a green and vigorous aspect, it will be found that the grass started thin, and nothing has occurred, or is likely to occur, before the 4th of July to thicken it—when mowing is expected to begin. Combining these and other considerations, the farmer can only expect a limited reward for his labor, in these hard times.

Besides, it will be found that many of the smart boys, who would be better employed in handling the "shovel and the hoe," and in sharpening the scythe, are gone to the marshes about Richmond, and the swamps of Carolina, where, if they escape laying their bones to moulder and decay, they may be looked upon as lucky fellows. ESSEX.

June 24, 1862.

A GOOD WOOD FOR THE SKUNK.

The *American Agriculturist* takes up the cudgels in defence of the poor, despised, but seldom kicked skunk, and gives him a good notice. Our contemporary says:

All summer long he roams your pastures at night, picking up beetles and grubs, poking with his nose potato hills where many worms are at work. He is after the grubs, not the tubers. He takes possession of the apartments of the woodchuck, who has quartered himself and family upon your clover field or garden, and makes short work with all the domestic arrangements of that unmitigated nuisance. With this white-backed sentinel

around, you can grow clover in peace, and the young turnips will flourish. Your beans will not be prematurely snapped, and your garden sauce will be safe from other vermin. The most careless observation of his habits shows that he lives almost exclusively upon insects. While you sleep he is busy doing your work, helping to destroy your enemies. In any fair account kept with him the balance must be struck in his favor. Thus among the animals we often find friends under the most unpromising appearances, and badly abused men are not unfrequently the benefactors of society.

For the New England Farmer.

CANKER WORMS---CROPS, &c.

MR. BROWN:—The canker worms have done great damage in the eastern part of this county, having, in many orchards, completely destroyed all of the foliage, and in such cases the apples have perished with the leaves. They appear to congregate in large orchards the most, scattering trees escaping mostly, or as a general thing. What is the best way to destroy or check them in their ravages for another year? They have not been in this town in any numbers for over forty years. One of our oldest citizens informs me that the 17th day of May, 1794, was a very cold day, and the night following was so cold that the ground froze quite hard. Previous to that it had been warm, and the trees had blossomed; the canker worms were then in full blast, destroying everything before them, but the cold and frost killed every one, and left no descendants, so that there were none here for years afterward.

I first observed them here on the 2d of June, many on the leaves, and others going up on the bodies and the large branches, from one-third to three-fourths of an inch in length. On the 4th of June I took an iron dish and put in one pound of brimstone, and set it on fire under one tree and smoked it completely. I could not kill them unless I held them *almost* into the "lake of fire" spoken of by John the Revelator. I call them fire-proof.

Grass looks about the same as last year; there will be about an average crop. In many places it was winter-killed. One large farmer suggested to me that it was owing to cutting the grass with machines—the driving wheel, and cutting-bar disturbing the roots and causing them to die. How is that, Brother Mowers?

Corn, potatoes and grain promise well thus far. With industry, hope and patience, the husbandman may expect a good reward for all his toil. Would it be profitable to keep a litter of sucking pigs with the sow till they would weigh 200 lbs. alive, and sell them at 6 cts. per lb., and feed them corn worth now 65 cts.?

In "altering" one a few days ago the intestines came out of the anus in length I should think four or five inches. We held the pig up by his hind legs, pressed them gently back, and with a needle and thread, (linen,) took seven or eight stitches through the skin; it is now doing well. Another case we had three or four years ago, which was somewhat different. We took an "entire hog" that would weigh about 125 lbs., which had but one testicle that we could find. That was taken out, and the butcher that had it said he would

run all risk of its being strong. Afterwards, he said that one-half of it was so bad that no one could eat it, and we had to lose it—about a dozen dollars. So much for not knowing what to do in the first place. In dressing it, we found the other testicle inside, lying close to the kidney, and of full size.

P. S. I would state that the canker worms "skedaddled" on the 14th and 15th inst., leaving, like the rebels, death and destruction behind them.

WEARE N. SHAW.

Kensington, June, 1862.

For the New England Farmer.

ON FARM ENGINEERING.

BY ALBERT E. WOOD.

[Read before the Concord Farmers' Club, in January, 1862.]

An engineer in the military art,—where the word originated, I believe,—is a person skilled in mathematics and mechanics; one who forms plans of work, both of offence and defence, marking out the grounds for fortifications, &c. When this skill was afterwards applied to the delineating plans and superintending the construction of our public works, such as canals, railroads, &c., the title of civil engineer was given to it.

Now that the farmer is becoming alive to his interests, he, too, claims an engineer; he has enemies to battle with; he has works, both of offence and defence, to construct. He need not, however, very often, go outside of himself, for this engineering. No true farmer, with a mind alive to his business, but has it within himself, if he chooses to apply it. Man's ambition says, Let us erect this wilderness into a fruitful field; let us make upon it a fit habitation; and it is the engineer in the man that is called upon to do it.

A good location of our buildings, and their proper construction, are the first considerations requiring the engineer. In this latitude, we spend a considerable portion of our lives in these buildings. Everything we do is in some way connected with them; they are our outer bodies; the bodies to our bodies; by them our degree of civilization may be judged. Everything dear to us in life is connected with them; in a word, they are our homes. Youth, manhood, old age, are bound to them by ties as dear as life itself. A house is built for a lifetime. How important that we do not plan it hastily.

No rules can be given for location or construction by which all can be governed. I will give a few hints, however, that may generally apply.

A position as nearly central as possible should be chosen, that the land we work upon may be conveniently near; a healthy location, as far as possible from miasmatic swamps, yet not too high upon a hill; a convenience to water, where a good well can be dug; a running brook is, also, of great use to both house and barn, especially so in lime localities, where the well water is hard. Then the relative position of our buildings should not be lightly passed over, as it is a matter of great convenience to have the barn near enough to the house to be connected by a shed or other building. Yet I think there are considerations that are against this plan that more than balance this convenience. There is danger of greater loss in case of fire; our olfactories may sometimes be unpleas-

antly excited by too close connection; the barn and yard are nurseries for myriads of flies and mosquitoes, who soon find their way to the dining-room, and frequently take away the pleasures of a good dinner, by presenting bills! It is important that the sleeping-room of the one having charge of the barn should command a view of it, and be sufficiently near to hear the bellowing of the cattle in case of trouble.

There is another consideration, I think, often neglected; we are all, by nature, gifted with a love of the beautiful.

"A thing of beauty is a joy forever."

And what more beautiful to us than a fine landscape? This pleasure in life was given us as a blessing; let us consider it in the location of our buildings.

A second consideration is, the dividing our land into suitable lots to meet our several necessities. It is curious to look over the farms in almost any part of New England, and see what might be called the want of engineering. Our forefathers were straight-forward, stern, resolute, without shadow of turning, as men, and it is a little strange that they should have handed down to us their streets and fences in such a crooked and wavering condition. One might think they had a love for geometry, and had attempted to represent upon their farms every possible shape mentioned within the leaves of Euclid, and a good many other shapes that you might search Euclid in vain for. Look at the line of our fences, and you see not only the pot-hooks and trammels of our grandmothers, but every variety of deviation from a straight line represented.

The question arises in my mind, What is the need of all this irregularity? It is a fact beyond question, that a straight line is the shortest that can be drawn between two points; if a wall is to be built between two points, why not have it a straight one, and save labor? I can see but one reason why this should not be done, and that is, that the longer the wall is the more stones it will take to build it. This might be a sufficient inducement, to the farmers in some of our neighboring towns to take pot-hooks as patterns, but I think no member of the Concord Farmers' Club need adopt it, as a better use can be found for the surplus stones one may find upon his farm. The unevenness of the surface and the sinuosities of the streams may sometimes force us into these irregularities, but such are exceptions.

For economy in labor, not only should our lines be straight, but all the angles, right angles. Who that has ever plowed an irregularly shaped piece but has seen this? Take a triangular shaped piece, for instance; you commence by plowing around it, and everything goes on well for a time, but before you finish, instead of spending your time in plowing, you devote it to turning the team around; this holds comparatively true of any deviation from a rectangle.

But, I hear somebody say, it is too late for us to talk about these things; our farms are as they were handed down to us; the fences are already built; true, but we have a chance every year to improve them; the crooked walls can be made straight, when we relay them; and it will, in many cases, be a saving of labor, to change and improve the shape of our lots.

A third consideration, and one, perhaps, requiring a little engineering that the farmer may not be able to do himself, is the measurement of the land. If a man owns a farm, it is a gratification to know how many acres and rods it contains. This, alone, would, naturally enough, induce him to have it measured; but, it seems to me, there are other inducements besides this. Not only should it be measured, and a plan drawn of the whole, but each lot should be measured. Every farmer, before he commences his work in the spring, looks his farm over attentively, and decides which fields he will plow, and which lay down: to what particular kind of grain, grass or root crop each piece shall be devoted; how much manure he will apply, and how much seed. Before deciding these several things, judiciously, he must know the area of each lot.

In the late autumn, when he sits down and looks over the result of his summer's labor, how can he judge if his crops are up to the average, above it, or below, unless he can tell from how many acres a certain number of bushels of whatever it may be was taken?

No man having the interests of farming at heart but wishes to try experiments. It has been truly said, "It is only by experiments that progress in any branch of agriculture can be accomplished. Any one that accomplishes an experiment, and accurately reports it, advances the science and practice of agriculture." How can these experiments be accurately reported, or how can one judge of them himself, unless the land is carefully measured?

A fifth consideration requiring the engineer in the man, is in reclaiming lands—bringing them from a cold, barren state, into one of fertility.

Water is one of the great necessities of life, both in plants and animals; it goes to make up a large portion of either; yet the farmer often finds it in the way of his improvements. This matter has, of late, in this country, been brought a good deal to our notice; a great deal has been said and written upon the subject, yet few of us fully appreciate its importance.

It has been ascertained, by careful observation, that more water falls upon the surface of the ground during the year than is needed for the growth of plants; this, in lands where it cannot pass down through the subsoil, must be in some way removed by artificial means, or it will prove an injury to our crops.

Draining is a process in agriculture which, if well done, needs no repeating. It is the first step necessary in order to avail ourselves of improved modes of agriculture. We have a great deal of land—and the best we have, if properly drained—upon which the bestowal of any amount of labor and manure is useless unless it is first drained. We may plow deeply, and subsoil in vain, if the land is "water-logged;" the seeds will rot instead of germinating; the roots cannot penetrate to a sufficient depth to get nourishment or to sustain a drought. The land is sour and cold, and the grass that does manage to grow upon it is not at all palatable or nutritious to our stock, and in winter the land freezes much quicker and deeper.

Water is the only exception in nature, I believe, to the law that matter becomes more dense by cold and expands by heat. Water is most dense

at about forty degrees above zero, and expands both ways from this point. If land is saturated with water in winter the water as it freezes expands and causes the ground to "heave." Small trees are often in this way thrown out of the ground, and many of our biennial and perennial crops injured, or entirely ruined, or "winter-killed" in this way. The land does not get suitably dry for cultivation till very late in the season, if at all, and thus our now too short season is rendered still shorter. Water passes from undrained lands almost entirely by evaporation. This is a refrigerative process, as any one can see by holding his wet hand in the wind. We often hear farmers speak of land as cold, and for this reason it is considered almost worthless. The land is cold, but not of itself. Place a man exposed to a stiff wind, with wet garments, and he will be cold; the heat of the sun is expended in evaporating the water, and in this way the heat becomes latent. Exchange the man's wet garments for dry ones, and he is comfortable; draw the water from cold lands and we warm them; the sun's rays will then penetrate them; the air circulate in them, and seeds will sprout and plants grow. Crops will start sooner, come forward more rapidly, be more fully developed and better matured. The roots can sink deeper, having a greater space to collect nourishment from, and are better protected from drought.

During the spring and early summer the roots are kept from going down by chilling contact with cold water. When drought comes on the water recedes, but it is then too late for the roots to follow it; they are confined to a narrow space upon the surface of the soil, and like the seed sown upon stony ground, they are soon scorched, and wither away.

Draining in another way prevents drought. In connection with proper cultivation the soil becomes more finely pulverized, and capillary attraction acts with most power in smallest spaces. A finely pulverized soil the better draws up the moisture, and the better holds a sufficient quantity to sustain plants through a severe drought.

If these statements are true, and I have sufficient proof that they are, how much there is in draining to call forth the engineering faculties and energies of the farmer. If by a little engineering he can make two spires of grass grow where one grew before, how richly is he rewarded.

It is admitted, I believe, upon all hands, that the most valuable land we have is the swamp or meadow land, that is so situated that it can be drained. Of the draining of these lands no one can entertain a doubt of the advantage derived. The only question that can arise, perhaps, is as to the depth of draining. I do not believe that swamps can be so deeply drained as to injure them, although it is unnecessary, perhaps, to carry the water line to more than three feet below the surface. I have no doubt that deep draining will render the top dry and springy for a time; but it will soon settle, and with the addition of a little sand or gravel it will soon become sufficiently solid for any crop. The soil of our swamps is made up mostly of partly decomposed vegetable matter, but not in a condition to be taken up by the roots of plants; when the water is removed, this becomes for a time spongy; but it soon settles, decomposition goes on more rapidly, and a fine, rich,

compact soil is the result; while saturated with water it can never decompose.

Besides being but slightly decomposed, the soil of our swamps contains an acid that must be removed before plants will thrive in it; this explains why lime and ashes are used with so much advantage upon such lands; they destroy the acidity, besides helping to decompose the mud. By removing the water both these results are attained, and to a much greater depth; decomposition commences at once, and by it the acid is destroyed.

If a farmer possess more land than he can cultivate well, and has irrigated meadows, it is often best to keep them as such, at least till he can find no other land as capable of being improved. Irrigated meadow lands are of great advantage to farmers when kept as such; they are as never failing springs, from which he can draw the where-withal to keep the rest of his farm from wearing out. Hay can be taken from them, year after year, without impoverishing them. Let us see what keeps up this fertility. Let us see how it is that the farmer is able thus continually to draw from this bank without sometimes making a deposit.

There is a stream running through it made up by a number of smaller streams. During a heavy rain every acre of our upland is washed, more or less; the muddy water, laden with those things which make plants grow, finds its way down into the stream, and as the stream is high, and crooked and narrow in some places, winding from this side of the meadow to that, the water, hurrying along, is dashed out upon the meadows at every turn; in spreading out it becomes comparatively quiet, and here the mud and water part company; the mud settles upon the soil, while the water continues upon its journey to the ocean. In this way our meadows are kept fertile; and in fertilizing the upland they but pay a debt they owe to them.

In straightening these crooked streams, I think the farmer is sometimes guilty of a little too much engineering. Through the straight, wide ditch that Mr. Thrifty has engineered, the water rushes without turning to the right or left, and the next neighbor down stream gets the benefit of the deposit that would otherwise have been left upon his own meadow. If a farmer has not enough other land to cultivate, and wishes to dry his meadow, then straighten the stream, by all means, but not otherwise.

But the strongest defence an engineer can plan for the farmer must be built within himself, and by himself alone. The only sure protection against want, the true guaranty of success in farming, that which covers all that has been said upon the point, is, that the farmer enter into the business with energy. Not satisfied with plodding on in the old path, however good it may be, followed by his father and grandfather before him, without looking to the right or left for improvements; not satisfied with confining his literary pursuits to the reading of the farmer's almanac, or an old newspaper borrowed of a neighbor; not satisfied with half a crop, year after year, upon land that is capable of bearing a full one; he profits by the experience of others, as found in the numerous books and papers now published upon agriculture. He meets with other farmers at farmers' clubs, and in this way receives the benefit of the experiments accomplished in the various sections of country, or

upon the different farms in the vicinity. These experiments may not be applicable to his land, but by considering them carefully, he acquires a knowledge of agriculture that cannot, in the end, fail to make farming with him a success.

A farmer's business is the cultivation of the soil, yet I see no reason why he may not also cultivate his mind. I see no reason why he may not spend his leisure time in study. No business offers better chances for the study of the natural sciences, and no one offers a richer reward than is offered to the farmer, if he study them and put the knowledge he thus attains into practice. The reason the farmer has discovered no new benefit from chemistry, is, that he has not studied it himself; he is satisfied with what is told him by some professor entirely ignorant of the practice of farming, and he generally finds his advice and directions entirely impracticable. Study and practice must go together in order to ensure success.

The time is not far distant, I believe, when this will be better seen and believed by the farmer than it now is, and agriculture become, in reality, what it now claims to be, a science.

May the Concord Farmers' Club take a bold lead in this direction.

A LOOK AT THE CITY HORSES.

Though not especially given to fast nags, we like horses, and always take pains to see them where they are collected in considerable numbers, in order to observe their treatment, ascertain their qualities, cost of keeping, and whatever else that appertains to them of an interesting nature.

With these views, we recently accepted an invitation from Col. EZRA FORRISTALL, the indefatigable and accomplished *Superintendent of Health* for the city of Boston, to look at the city horses, and the stables in which they are kept. Our first call was at the stable on Grove Street. Some forty horses are kept here, and under a system that would command the admiration of any person, whether he knew the difference between a horse-stall and a hog-pen, or not. Every stall has its number, with a corresponding one for the horse which is to occupy it, and for the harness he wears. The building is of brick, is long and sufficiently wide to afford two rows of stalls the entire length, with a space some ten feet wide between the heads of the horses. The stalls are principally of iron, the feeding boxes entirely so, and everything about them is scrupulously clean. We were there at noon of a hot day, yet the horses suffered no annoyance from flies, and stood as quietly as in the midst of a winter day. Every part of the building is kept clean,—so that nothing is left to offend any sense. All the departments of the establishment, the rooms where harnesses are cleaned, where the street brooms are made, and where carts and carriages are washed,—presented the same neat and orderly appearance that the stable itself does.

The stables now occupied at the South End of the city, are old, low posted and inconvenient,—but even under these disadvantages, everything was in order and moved with the precision of clock-work. Just before leaving, we saw the men and teams turn out to their afternoon work, some fifty of each. In hitching up there was no confusion, no scolding, swearing, or loud talking, even, although some of the horses were quite young, and evidently undecided as to what course they ought to pursue amidst their trappings and the thunder of the rolling carts.

None of the horses weighed less, we should judge, than 1200 pounds, so on, to 1600! and are well-formed, sound animals, admirably fitted for slow movements and heavy draft. They are cleaned, fed and washed with great regularity, and soon become fat. They then each receive about seven quarts of grain, corn meal, and oats, or cracked corn, per day, wet with a little cut hay, and once a week, at noon, on Sunday, a small quantity of long hay. This keeps them in excellent condition at trifling cost, and under this treatment, they are able to perform a vast amount of labor. But they are never worked on a trot or beaten, or abused in any way. Col. Forristall's opinion is, that scolding and beating are always injurious; that all horses, if properly treated from the beginning, will labor kindly and faithfully, to the very extent of their ability. The lover of the horse can scarcely spend a more agreeable hour than to visit the stables of these noble and serviceable animals. They are among the pleasant objects in our streets, and always attract attention. Thanks to the City Fathers for furnishing them so kind a master. They are fortunate in securing the services of a gentleman of ability, and one who is prompt and decided in the discharge of his duties.

The city is now erecting new stables at the South End which, when finished, will undoubtedly, be the best ever constructed in the State, if not in the country.

WHITEWASHING SHINGLES.

Fresh or caustic lime, applied during the heat of summer, and after the wood has become thoroughly dried, enters the pores and tends strongly to prevent decay. We have recently examined a board fence, which had been whitewashed in successive coats about 18 years ago. The boards were hard and sound, and had not become covered with moss, as was the case with another fence near, built at the same time. There is no doubt that a great advantage would result from whitewashing shingles before laying them. We have, on a former occasion, given some instances of the durability thus imparted to them. A late number of the *Boston Cultivator* gives some additional examples. J. Mears, of South Abington, performed the experiment in substance as follows:

—He procured a vat, (a lime vat or a tannery does well,) and applied salt with a small portion of potash to the lime, and immersed the shingles for four hours. The wash was afterwards brushed over the shingles when laid. This made a fire-proof roof on a blacksmith shop, now eleven years. Silas Brown, another correspondent, says that 25 years ago, he dipped shingles in a large kettle of lime wash to which salt had been added, and the whole kept boiling. A few shingles were dipped in all over at a time, long enough to soak them well, and then thrown aside to dry. In a short time all the shingles were thus prepared. Although what are termed "sap shingles," they have now lasted twenty-five years, and "may do so for years to come." Several experiments of a similar character have been made since, with very successful results.—*Country Gentleman*.

MANURES---PROFITS OF FARMING.

At the late Fair of the New York State Agricultural Society, meetings for discussion were held each evening, Hon. A. B. CONGER presiding. On Tuesday evening, the subject chosen for discussion was—

"How shall barn-yard manure be saved, and how applied? Shall it be kept under sheds? Shall it be piled? Shall it be applied raw or rotten? Shall it be put on the surface or plowed in? And is a different method of application required for different crops, and for pasture and meadow lands?"

GEORGE GEDDES, of Onondaga, President of the Society, who occupies a farm where grain is principally grown, and where straw is very abundant, gave the following directions, as the result of his observations on the subject: 1. The barn-yard should be made so that the manure would not run out of it. 2. Straw enough to absorb all the liquid. Then in spring, pile up the manure in heaps, with square sides and flat tops. If very strawy, the heaps should be high, and the tops somewhat hollow to hold the water, or they will not rot. If this is done in the spring, by July the piles will be in a condition to cut with a spade. The outsides will not decay, and they should be pared off and thrown on top. It is folly to put strawy manure under a shed. If it is three-fourths cow-dung, it might be advisable to put it under sheds. Sheep-manure under sheds will fire-fang. Pile it up early, and it will not fire-fang. The dairymen want it under sheds, but grain-growers do not. In regard to its application: Put it on either grass or wheat. Do not put it on corn directly; it produces weeds. Rot it thoroughly, draw it out on the wheat fallows and drag it in. Do not plow it in. Better on top than plowed in. Believes in top-dressing clover or grass. Get a good crop of clover, and you have laid the foundation for subsequent crops.

HON. MOSES EAMES, an extensive dairyman, spoke of the benefit he had derived from the use of earth in his barn-yard, as an absorbent of liquid manure. A top-dressing of five loads per acre, of this saturated earth, applied in the fall, produced three tons of hay per acre.

WM. ANDREWS, of Connecticut, has not straw enough for litter. Wheels the manure into covered sheds, and in the spring applies it to corn.

Has a drain from his yard, and irrigates an excellent crop of grass.

Mr. PARKER, of Jefferson county, had never summered ten loads of manure. In December, January, February, and the first half of March, drew out the manure while fresh, and piled it up into a large heap. In April spread the manure and sowed wheat. Where the heap was, the wheat was too rank and blasted. This satisfied him that manure should not be piled. (We suppose Mr. P. is in favor of spreading it on the surface while green, as he remarked that his land is not hilly, and there was no danger of the manure being washed away.) When he had not straw enough to litter, he goes to the woods and gathers leaves. Puts muck, straw, leaves and horse-manure into the pig-pens, and the pigs make it a prime article for the garden and orchard and for the corn-field.

Mr. FAXTON, of Utica, alluded to the time when the farmers on the Mohawk used to make "bees" to clean out their premises, drawing their manure out on to the ice, so that when the river broke up it might be washed away, and thus save them any further trouble! Now, the farmers wisely took great pains to keep up the fertility of the soil.

S. WALRATH, of St. Lawrence county, said his biggest crop was manure. Does not believe in having foul seeds in manure. Cuts the hay and weeds before the weeds go to seed. Saves everything; draws muck, grass, weeds and refuse of all kinds into the barn-yard to rot. Applies his manure not to corn but to grass. Corn very clean, grass free from weeds, and both of much better quality.

On Wednesday evening, the subject for discussion was:

"DAIRY FARMS.—Is it advisable to cultivate dairy farms so as to secure fresh pastures, or are permanent pastures most profitable; and how can noxious weeds be excluded from pasture lands the most advantageously?"

Mr. WALWORTH, of Lewis county, thought that on some of the gravelly soils of the county the old pastures were best; but on the limestone soil like that in his section, breaking up the land once in eight years or so was a great improvement. Cows did not like the new seeded grass best. White daisies, yellow dock and moss are troublesome on the old pastures, and even on the new it is difficult to keep them down.

Mr. BROWN, of Lewis county, had a sixty acre pasture run over with briars. It kept about ten cows. He cut them, and subdued it by keeping sheep. The June grass came in and spread over it like a mat. It now keeps twenty-five to thirty cows. Thinks this better than if it had been broken up. Had sowed a little plaster on it. It is limestone soil.

Mr. MILLER, of Lewis, agreed with Mr. Walworth. Cows and horses will resort to the newly seeded land, and leave the original pastures.

Mr. WALWORTH—It is important to manure as well as plow.

Mr. LYON, of Lewis, said gravelly land required to be plowed oftener than the limestone lands. Cattle will leave timothy and clover, and go to the June grass brought in on the native pastures.

S. WALRATH, of St. Lawrence county.—The great point is to get land clean before seeding.

President GEDDES remarked that Mr. Walrath's farm was the cleanest and neatest he had ever seen. Not a square foot of weeds on the whole farm of fifty acres. If Mr. W. would come to Onondaga, they would send him to Congress.

OLON ROBINSON.—That would be but a poor compensation.

Mr. WALRATH.—Land quite natural to white clover. Top-dressed his grass lands; cows did not like it for a few weeks, but after mowing prefer it to all others. Considered June grass a weed, and took as much pains to destroy it as any other weed. Cows prefer the new seeded land. Injurious to the new grass to feed it the first year.

E. L. HALSEY, of Cayuga, said permanent pastures gave a better quality of butter. Clover will carry more stock.

Mr. STANLEY, of Lewis county, has pastures sixteen years old, that produce better than lands seeded three years ago. Cows prefer the old pastures in the spring. The grass starts quicker.

Mr. LYON, of Lewis county, had two pastures—one which had been down three years, and one seven years. The former afforded double the feed of the latter.

Mr. ELLISON, of Herkimer, spoke highly of plaster for grass lands. Cattle prefer the plastered grass. Frequent plowing is not beneficial. Plaster in the spring, and manure in the fall.

OLON ROBINSON recommended salt as a top-dressing for grass lands. It had proved very beneficial on his farm at Westchester county. It sweetens the grass. He had sowed as much as ten bushels per acre.

On Thursday evening, the subject for discussion was—

"THE AGRICULTURE OF NEW YORK.—Is it paying a fair compensation for the capital and labor employed?"

D. PARKER, of Watertown, did not keep a record. If he did, he thought it would show that farming was not very profitable. He had got a living, however, and his farm would sell for \$4000 more than when he commenced. He ran in debt for the farm (93 acres.) Had had rather a hard time of it, but it was now all paid for, with good buildings, etc.

J. J. THOMAS mentioned several cases in Cayuga county, where farmers had made large profits. One young man, with \$1000, bought a \$5000 farm, and in five years had paid all but \$1,800 from the profits of the farm. Another had bought a \$6,000 farm, and paid \$1,000 a year on it from the profits. Several such instances of successful farming were mentioned. Others of equal intelligence might do the same.

A gentleman asked, "What crops those farmers had grown?" Mr. T. replied, "In most cases, mixed husbandry—wheat, barley, oats and peas; in some instances, peas had been substituted for barley. They had also underdrained."

A. L. FISH, of Herkimer, thought the subject hardly debatable. The State of New York had become wealthy, and the principal source of it was agriculture.

OLON ROBINSON eloquently elaborated the same idea. The majority of merchants in New York were bankrupts at the end of fifteen or twenty years.

Mr. ELLISON, of Herkimer, thought if the merchant had practiced the same economy he would

be richer than the farmer. He would be honest, and admit that farmers were better off than the mechanic. Farmers might make more money if they farmed better. His friend Fish had grown rich by the application of scientific principles to the culture and manuring of the soil. Keeps good cows, and makes 650 lbs. of cheese per cow. One year, he (Fish) had made some 700 lbs. It was just as cheap to keep a good cow as a poor one.

E. CORNELL, of Ithaca, gave some very interesting statistics of Tompkins county, showing that the land, buildings, &c., were worth \$13,000,000. The crops raised were worth \$2,713,011. Allowing half of this sum for labor, seed and taxes, and we have over 10 per cent. interest on the capital. Farmers are getting rich. Better buildings, finer houses, etc. The land is not deteriorating—it is annually becoming more productive.

For the New England Farmer.

HARRIET MARTINEAU ON AMERICAN AGRICULTURE.

In the year 1835, Miss Martineau made a tour of observation in this country, and on her return home published a couple of very interesting volumes, embodying her views upon American society, and commenting with a good deal of sagacity upon our *agriculture*. Upon the subject of the thorough tillage of England, and the slovenly of America—a subject lately much discussed—she makes the following sensible remarks:

“English farmers settling in the United States used to be a joke to their native neighbors. The Englishman began with laughing, or being shocked, at the slovenly methods of cultivation employed by the American settlers; he was next seen to look grave on his own account, and ended by following the American plan.

“The American plows round the stumps of the trees he has felled, and is not very careful to measure the area he plows and the seed he sows. The Englishman clears half the quantity of land—clears it very thoroughly—plows deep, sows thick, raises twice the quantity of grain on half the area of land, and points proudly to his crop. But the American has, meantime, fenced, cleared and sown more land, improved his house and stock, and kept his money in his pocket. The Englishman has paid for the labor bestowed on his beautiful fields more than his fine crop repays him. When he has done thus for a few seasons, till his money has gone, he learns that he has got to a place where it answers to spend land to save labor; the reverse of his experience in England; and he soon becomes as slovenly a farmer as the American, and begins immediately to grow rich.”

This is all very natural to expect, as the Englishman and the American are as near alike as two eggs, (as Shakspeare would say,) their different positions in their different countries or the shadow of their institutions only making the apparent dissimilarity. But while Miss Martineau knows the American farmer recognizes the high comparative price of labor in this country, she cannot account for his opposing immigration so strenuously as he does, when the tendency of this is to make labor cheaper. But perhaps this is the result of mistaken political considerations. Respecting the

close cultivation of the soil, this is a subject which no theorizing or lecturing will influence, but will come as a necessity with the increase of population and the dearthness of land. The American farmer, where land is cheap and rising, always wants more than he can cultivate, as a reserve for speculation. Hence Miss M. observes:

“The pride and delight of Americans is their quantity of land. I do not remember meeting with one to whom it had occurred that they had too much. I saw a gentleman strike his fist on the table in agony at the country's being so ‘*confoundedly prosperous!*’ * * * Land was spoken of as the unfailing resource against over-manufacture; the great wealth of the nation; the grand security of every man in it.”

If what she observes in another paragraph is true, (and it undoubtedly is,) we need have no fears that agriculture will run down; in fact, it appears to be a kind of safety-valve to all other vocations.

“The possession of land,” she observes, “is the aim of all action, generally speaking, and the cure for all social evils among men in the United States. If a man is disappointed in politics or love, he goes and buys land. If he disgraces himself, he betakes himself to a lot in the West. If the demand for any article in manufacture slackens, the operatives drop into the unsettled lands. If a citizen's neighbors rise above him in the towns, he betakes himself where he can be monarch of all he surveys. An artisan works that he may die on land of his own. He is frugal, that he may enable his son to be a landowner. Farmers' daughters go into factories that they may clear off the mortgage from their fathers' farms; that they may be independent landowners again.”

Miss M. speaks favorably of this, and remarks that “it falls out well for the old world in prospect of the time when the new world must be its granary.”

Both of the great political parties, she observes, are proud of their lands, but the democratic party were wont to say that the United States were intended to be an agricultural country. “It seems to me they are intended to be everything.”

In Massachusetts, and, in fact, in most, if not all the New England States, the authoress supposed agriculture to be on the decline—or in other words supplanted by manufactures, for which she thinks it best fitted; and in this connection she alludes to many farmers dividing their time with other pursuits—fishing and shoemaking, for instance.

Miss Martineau's volumes are written with remarkable vigor and freshness, abounding in a good recognition of general principles, sagacious observations, democratic tendencies and wise prophecies—all covered with her hearty good wishes. But, at present, I will make no further extracts.

D. W. L.

West Medford, July, 1862.

THINNING PEARS.—One great error in the management of dwarf pear trees, is allowing the trees, especially young trees, to bear too much fruit. It is absolutely necessary for the health of the trees and to secure good sized fruit, that the young fruit be thinned *thoroughly* at this season. Don't be afraid of thinning too much.—*Genesee Farmer.*

HELPING TO BUILD NESTS.

One of the best things in *Merry's Museum* for last month is the following article illustrative of the character of one of the best men in our State, Hon. JOHN PRESTON, of New Ipswich. He is a man whose good nature sheds a light upon all who come within his influence. He was the advocate of a bird law in our Legislature, in 1846, and we well recollect the entrance of a bird into the Hall of the House of Representatives at the time he was advocating their cause. The effect was electric. But the law for their protection did not pass. Mr. Preston's milk of human kindness is not confined to the feathered race—it extends, and in an enlarged degree, to the whole human race.

Look upon that grand old elm and see that new bird's nest on one of its overhanging branches. What a beautiful place for a quiet home for the nestlings, and how admirably it is built and securely fastened among the twigs! It belongs to a pair of orioles, or golden robins as they are sometimes called. These birds construct their nests out of bits of twine, cotton, tow, etc., which they pick up with great pains from the surrounding country. On the tree which you see in the picture, a pair of these birds have built their nest for several years, because here they were sure of a kind reception and a helping hand.

I saw that nest built the other day, and learned the secret of their attachment to the place. Being on a hasty visit to the country, I called at the residence of John Preston, Esq., of New Ipswich, N. H., an old friend of Robert Merry. I found him seated in his little office very busy cutting up twine of different lengths. He greeted me very cordially, but kept on with his work, which seemed to be of great importance. When he had prepared quite a handful, he led the way out of the office, and deposited the strings upon the cross-bars on which you see the little bird under the tree. Then he told me they were for the birds to build their nests with, and that every year, (when the sweet notes of the oriole sounded through the branches of the trees, filling the neighborhood with sweetest music,) he had supplied them with materials for building their nest.

We retired a short distance, and very soon down came one of those beautiful birds like a flash of golden light, and commenced selecting material for his nest. I supposed he would take the first piece that came to hand, but like a skilful builder, he took up first one piece, then another, examining them very curiously and apparently measuring the length with his eye, like a practiced carpenter. When one was found that suited his purpose, away he flew to his chosen limb, and having securely fastened it, he returned for another. He was the very personification of industry, and set an example worthy of imitation by many bipeds without feathers.

Ordinarily it would require a week or more of hard work for a pair of these birds to build their nest, as they must usually take long journeys to find proper materials, but having everything provided at hand, they nearly completed the outer walls in a single day.

The following morning my friend provided a

quantity of tow from bits of rope, which he picked to pieces for the use of the birds, which they speedily appropriated for a soft lining to the nest. The matter interested me so much that I brought away a good photograph of the tree and surroundings, taken on the spot.

I was greatly pleased in watching them; but what I admired most, and what I am sure you will also think worthy of imitation, was the kindness shown to these little creatures by this noble-hearted man. He could find time from pressing business, to care for the birds that came to cheer his home with their songs. It made me love him better than ever. He has his reward for his kindness in the friendship of the birds, who have learned to know their benefactor, and sing for him their choicest songs.—*Portsmouth Journal*.

For the New England Farmer.

TRIAL OF MOWING MACHINES.

MR. EDITOR:—A trial of mowing machines took place near Berry's tavern, in Danvers, on Thursday, the 26th inst., under the auspices of the Essex Agricultural Society, and superintended by the Committee on Farm Implements. At 10 o'clock, the time set, the still frowning aspect of the lingering storm clouds had deterred many who were anxious to witness the trial, and led the Committee to hesitate whether to adjourn to a finer day, or to proceed. By 11 o'clock, however, quite a large number of persons had collected, and the agents of the different mowers were already on the ground, desiring to show farmers how easily, handsomely and economically their grass could be cut, while they only looked on. The Committee, therefore, concluded to step into the yet reeking grass, and set off the requisite number of one-quarter acre lots, from a field well adapted to the purpose, offered, with his accustomed generosity, by one of the Committee, E. G. Berry, Esq. One or two of the mowers cut the grass from the headlands, where spectators might stand and the mowers turn, and at half-past one the trial commenced.

E. E. Lummus, of North Beverly, entered one two-horse and one one-horse Woods mowers, also one Davis improved. Amos Poor, Jr., of Newburyport, entered one 4 foot bar, (two-horse,) and one 3½ foot bar, (one-horse,) Union, and also one Manny, (one-horse,) owned by Daniel Richards, of Danvers. S. A. Merrill, of Salem, entered one 4½ foot bar, and one 4 foot bar, (each two-horse,) and one 3½ foot bar, (one-horse,) of the Buckeye.

It was arranged that only one mower should operate at a time, so that each person might give his undivided attention to each machine. But want of time at last compelled the Committee to let two move together. The Woods, the Union and the Davis improved were all new machines, light, and yet apparently well put together and strong. The Davis improved did not work until the writer was compelled to leave the field. The Buckeye and the Manny had been often used, and their merits are well understood.

The Committee, five of whom were present, considered their duty on the occasion to be to give all those interested an opportunity to exhibit, and see, and compare the operation of the various

mowers, so that each person should be the better able to judge which of them, on the whole, would be best adapted to his own work. At this time, when the sons of our farmers and so many of the constantly diminishing number of good mowers have thrown aside farming implements for the rifle and the bayonet, these mowing machines are becoming a necessity; and the great question is, Which shall I buy?

The Committee regret that they had not the means of measuring accurately by the dynamometer the draught of the different mowers. That would have settled one important point. They were unanimous that the work was all well done. And every farmer present, who owns only one horse of nearly 1000 pounds weight, might have been satisfied that with one of these machines he can do his own mowing well.

CHAIRMAN OF THE COMMITTEE.

Haverhill, June 27, 1862.

HAYING.

The farmer is now in the midst of the haying season, when he is to cut and secure one of the most important crops of the farm. In consequence of the late rains in this region, farmers did not commence haying as soon as has been customary into ten or twelve days. Much of the month of May was dry, so that the grass crop was retarded in its growth, and since July came in, has been in a condition to be greatly benefited by the warm and frequent rains. The middle of July, therefore, finds us only fairly engaged in the great work.

Farmers, generally, do not now feel that they are obliged to commence cutting their grass much before it is in its best condition. Previous to the days of mowing machines, they began early, though the grass might not be in blossom, lest they should not get through before some of it had gone to seed. With the aid of mowing machines, there is little danger of this result now,—and this is one of the advantages which they confer. With a good machine, as much grass may be cut in two or three hours in the evening, or in the morning, as several hands can take care of for a day following. It will be spread as it is cut, and ready for the sun.

Good farmers differ in opinion as to the best mode of curing hay. The practice many years ago was to expose it two days to an intense sun, the hotter the better. Under this treatment the hay became nearly as brittle as glass, and a large proportion of its nutritious properties were wasted. It would certainly keep well in the barn, for there were not juices enough left to get up a sweat, and produce mould and fermentation. But it was hard and glassy, and in our judgment, much less valuable than if it had been cured more in the shade.

To accomplish this, the grass should be cut and

evenly spread, and when thoroughly wilted—not dried—thrown into cocks and covered with caps, where it will lay, safely, from thirty-six hours to three or four days, according to the state of the weather. If the weather is clear and hot, on removing the caps, the top of the cock, say a fourth part of it, will be found well cured, and sufficiently dry to go into the barn, which is evidence that the process of curing goes on rapidly while the hay is in this condition. But it is well to throw the cocks open, admit the sun and air to every part of it for an hour or two, turning it upside down if necessary, and then it will be in excellent condition to go in. If the weather is cloudy and damp, or stormy, it is usually sufficiently cool to prevent heating, for three or four days, and during that time the hay will become so much made as to require but little sun and air afterward.

Grass cured in this way is not brittle, but flexible, is aromatic, has a lively greenish color, and retains most of its nutritious properties. Stock will eat good grass thus cured with avidity, and will produce a good flow of milk, or lay on fat or flesh, without the use of grain. We do not mean to say, however, that it is best always to leave hay out three or four days,—but that it is better to cure it partly in the cock than to expose it two entire days to the sun.

CLOVER HAY.

Clover hay should be cut late in the afternoon, or early in the morning of a clear day. Let it lie without disturbing it until about two o'clock, and then gather it into cocks with a fork, and cover it with caps. It should then be left in this condition for two days, when the cocks should be thrown open for an hour or two, and it will usually be found in fine condition to be housed. Under this process the leaves and blossoms will retain so much of their juices as to adhere to the stem, so that very few of them will be found upon the bottom of the hay cart upon unloading it. The stems will also be juicy, sweet, nutritious, and easy to masticate by the animal using them. Such hay we consider more valuable than any other that we secure, and we hope hereafter to see it take the place of half the fields now devoted to other grasses.

SALT ON HAY.

Many persons practice adding salt to hay as it is stowed away in the bay or upon the scaffold. The practice is a good one when the salt is used moderately—but in such quantities as some apply, we think it must be injurious to both hay and the stock that consumes it. Some farmers have told us that they use *half a bushel* to a ton of hay when they feel obliged to get it in before it is sufficiently cured! Such fodder as this would make, ought to be reported in the price current

as *pickled hay*! It is supposed that it induces scours in stock, and often proves quite injurious to their general health. It is a wasteful practice to get in hay half cured, and depend upon salt to save it. It would be better economy to purchase hay caps, and with their aid secure the hay in perfect condition.

For the New England Farmer.

PROGRESS IN NATURAL HISTORY.

I noticed in a late communication over the signature of "Farmer," some excellent ideas, but many uncandid sneers at students of natural history, who endeavor to benefit others by imparting the information they have gained through careful observation and long experience. While there are numbers of empirics and superficial writers on these subjects, we are not "*ab uno disce(re) omnes*." If the farmer will not, through indolence or disinclination, or cannot, from want of time or incapacity, study the works of nature himself, he must be at the mercy of every ignorant pretender who has scarcely learned, as your correspondent says, "to distinguish a crow from a robin, or a hawk from a dove, a grasshopper from a housefly, a butterfly from a mosquito," &c. But if, in the long winter evenings, instead of yawning away the hours from supper till bedtime, or spending them at the village tavern, he would take up a simple course of study, on the subject, for instance, of insects—a branch which is most intimately connected with his pursuits—he would find himself amply repaid. If he were to learn the characteristic distinctions between a beetle and a fly, he would not, as do many of our otherwise intelligent farmers, asseverate, with solemn sincerity, that the "rose bug," towards the end of the summer, sheds its wings, and deserts its former pasture of the leaves and flowers, becomes a hairy, yellow dungfly, and frequents manure heaps for the remainder of the season. If he were assured that the beautiful painted butterfly which he cautions his children not to catch nor injure, was a deadlier magazine of destruction to his kitchen garden than ever were canister, grape or shrapnel to the advancing column, or that the little round red beetles, not larger than a half pea, that he finds "eating up" his grain crops, were doing more in one day to rid him of the real destroyer, the plant-lice, than he, in spite of his size and strength, could accomplish in a week, would he not regard the information as a valuable acquisition, even at the expense of an hour's hard study?

"Farmer" asks, "what help does the farmer, well versed in entomology, derive therefrom on a visitation of the caterpillar, the palmer-worm, the canker-worm, or the army-worm, over his unread neighbor?" If he is truly "well versed" in entomology, he will be able to check, if not prevent their ravages, by attacking them at their weakest points. If he sees, on the twigs of his apple trees, little brown clusters of eggs, in the fall and winter, or if, from the middle of June to the 10th of July, he finds on his fences, and beneath the eaves and clap-boards of his house and barn, oval cocoons, sprinkled with a sulphurous powder, he will pick them off, and crush them under foot; then he can see, the next spring, his apple-trees put out their

green leaves, and cover themselves with their milky blossoms, without apprehension, and will have no "visitation," while his uninformed neighbors all around him are complaining of their vanished foliage whose place is poorly supplied by the filthy, whitened sepulchres of the "web-worm."

It does not follow, by any means, because a farmer cannot systematically name birds, quadrupeds, reptiles, and insects, coming under his observation, that he knows nothing about them," but he is apt to jump at conclusions, which are often totally erroneous, and the results of his action in the premises is often productive of irreparable injury, as he afterward experiences. A superficial observation is no less a dangerous thing than a little knowledge. A. sees a bird drilling holes in his trees; he shoots him, of course, and says to himself, "I have done a good job; he was sucking the sap." So pleased is he with the knowledge he has gained, that he continues the practice, and in a year or two, finds his trees dying, in spite of the vigilant warfare he keeps up against their supposed destroyers; and when he cuts them down for firewood, he exposes a wonderful number of holes and burrows in the body of the trunk, but none through the bark, excavated by the indefatigable woodpecker in search of his rightful prey, the borer. Now, even if A. had never opened a book on the subject, nor been informed by any learned D. D., but had merely carried his observations a little farther, and had opened the body of the first bird he had shot, the grubs of the boring beetle, and the absence of sap, would have shown the folly of jumping at a conclusion without more facts to support it. B. would laugh in your face, if you should recommend him to kill all his cattle, because they occasionally break into his cornfield, or kitchen garden, and eat, trample and destroy a part of his crops; but at the same time he will exterminate the crows, when corn has been planted, or the robins, when strawberries and cherries are ripening, because these season their meal of cutworms with a kernel of corn, or he has heard some one say that they sucked eggs and killed young birds; while the others, after bringing up their young brood upon injurious caterpillars, at the rate of fifty to a hundred per diem, think it no harm to take a few cherries from the overloaded boughs, to vary their repast. C's entomological lore consists of the apothegm—"insects are injurious to agriculture." Accordingly, he proceeds to burn, slay and destroy indiscriminately friends and foes, the marauding caterpillars, the beetles of the wire worm, the moths and butterflies, together with the dragon flies, the wasps, ichneumons and ground beetles; and that—by illustrious precedent—reminds me of a little story which was related in my hearing by Prof. —, at a meeting of the Essex Institute, and although I cannot give it the inimitable flavor of his version, I will do my best. A certain minister, who mingled his studies of Divine Revelation with researches into the book of Nature, was settled somewhere "down east," and continuing his investigations as usual, was surprised in his study by a deputation of wiseacres from his congregation, who after a series of hems and haws, opened the subject through their ringleader as follows:—"Mr. —, the people think you spend a good deal of time in poking round the fields and catching *bugs* and *butterflies*, that would be better employed in your studies, or in going round doing

good, in visiting them, and taking more interest in their welfare." Scarcely giving him time to finish his speech, Mr. — burst out abruptly: "Mr. Jones! Do you keep a cat?" The astonished Jones hitched back his chair at least a foot, before he replied, "Certainly." "What do you keep a cat for?" snapped the minister. "Why, to kill the rats." "What do you want to kill the rats for?" (short and sharp.) "Why; because they eat up my property," stammers Jones more amazed than ever, thinking the Rev. Mr. — quite insane. "Mr. Jones," says the minister in a lower tone, and looking earnestly into Jones' eyes, "did you ever see—when you were out hoeing your corn—a large, black beetle, more than an inch long, very smooth and shiny, and very smart on his legs?" "O! yes, very often." "And what did you do with him?" "I killed him," innocently replies Jones. "You've killed a cat! You've killed a cat!" shouted the minister, and no other answer would he vouchsafe to the delegation. It is supposed that they deliberated on the matter, however, and thought better of this foolish way of spending time, for they were afterwards known to come to the parsonage to inquire the names and habits of curious animals that they met with, while the minister, at last accounts, was not dismissed, nor requested to resign.

In like manner, I, who am but a humble student in the vast field of natural history, may be able to contribute my mite in the form of facts, &c., about insects, and shall be happy to give our good friend "Farmer," and others, any information in my power, in return for their experience in the same subject.

F. G. SANBORN.

Boston, July 7, 1862.

DON'T DRINK MUCH WATER.—A person in good health, and in the moderate pursuit of business, does not feel like drinking water, even in Summer-time, if not very thirsty. In fact great habitual thirst in Summer is the sign of a depraved appetite, resulting from bad habits; or it is a proof of internal fever; and the indulgence of even so simple a thing as drinking cold water largely in Summer-time, especially in the early part of the day, will produce a disordered condition of the system. Most persons have experienced more or less discomfort from drinking largely of cold water. If we drink a great deal, we must perspire a great deal; this perspiration induces a greater evaporation of heat from the surface than some have to spare; the result is a chill, then comes the reaction of fever. Many a person arises from the dinner or tea-table, in June, chilly because too much cold fluids have been taken. Those who drink little or nothing, even of cold water, in Summer, till the afternoon, will be more vigorous, more full of health, and much more free from bodily discomfort, than those who place no restraint on their potations.—*Hall's Journal of Health.*

TEA BRANDS AND THEIR MEANING.—The following will interest housekeepers:—"Hyson" means "before the rains," or "flourishing spring," that is, early in the spring; hence it is often called "Young Hyson." "Hyson skin" is composed of the refuse of other kinds, the native term for which is "tea skins." Refuse of still coarser descriptions

containing many stems, is called "tea bones." "Bohea" is the name of the hills in the region where it is collected. "Pekoe" or "Pecco" means "white hairs," the down of tender leaves. "Pow-chong," "folded plant." "Souchong," "small plant." "Twankay" is the name of a small river in the region where it is bought. "Congo" is from a term signifying "labor," from the care required in its preparation.

SKILL IN MARKETING.

One of the branches of his business which a farmer should well understand, is marketing. The extreme eagerness which some manifest, to get an additional half cent per bushel, is hardly to be recommended, nor are the anxiety and sleepless nights which they endure, while fearing the market may decline instead of rising, compensated for in the small additional amount possibly obtained. As a general rule, farmers may sell whenever they have the article ready and there is an active market; the cost of keeping, the danger of waste, the loss of interest, &c., often overbalance a slow advance. But there is one point toward which they may direct all their energies—this is, to have a *good article*, and to have the reputation of always furnishing such. We have known poultry dealers to give from two to three cents a pound more, at all times, to a farmer who had honestly earned a reputation of having the very best, and always put up in the very best manner—and this poultry would sell when a poorer article would not. It is so with marketing fruit. An apple inspector told us that a considerable portion of the fruit offered him the present autumn, proved defective and unfit for sale, after removing the few fine specimens purposely laid on the top of the barrels to conceal the bruised and scabby fruit below. Those who indulged in such tricks lost their sales, and will be watched another year. On the other hand, those who have cultivated their orchards well, and taken pains to raise the best, and who have carefully picked, assorted, and put up what they had to sell, will soon be sought by dealers, and will receive a higher price than others. As an instance of success of this kind, we copy the following statement from the *Prairie Farmer*—and no one can doubt that the successful man of these two, took more pains in picking carefully and in putting up properly; and as a good manager in one way is usually a good manager in others, there is no doubt that his orchard was in better condition:

"I am acquainted with two men occupying about the same range of land, with farms opposite each other, who happened to carry eighty barrels of apples each to market the same week. One of these men got a certain sum for his crop; the other got just \$60 more, or an average of 75 cts. more per barrel. One had sufficient mercantile skill to lead him to assort his crop into grades—put them into clean and uniform barrels, and fix a price upon each class, and in consequence of his knowledge of their worth and skill in assorting, etc., he realized \$60 more than his neighbor did, on the same amount and quality of apples, without expense, and with but little trouble; and I believe it is not only in marketing apples, but grain and even stock, that the seller should know the real value of it, before disposing of it."

For the New England Farmer.

THE BIRDS OF NEW ENGLAND---No. 19.

WORM-EATING WARBLERS.

Worm-eating Warbler—Swainson's Warbler—Blue-winged Yellow Warbler—Golden-winged Warbler—Nashville Warbler—Orange-crowned Warbler—Tennessee Warbler.

The *Vermivora*, or Worm-eating Warblers, constitute a well marked section among our numerous tribe of Warblers. They are surpassed by no other group in the agility they exhibit in procuring their food, and, in some respects, in their habits, considerably resemble the Titmice. Their colors are generally plain, and in their feeble songs we observe nothing particularly noteworthy. As their name indicates, their food chiefly consists of caterpillars, and the larvæ of other insects that infest the trees, and spiders. Though the group is widely distributed over the eastern parts of the United States, none of the species are found to be anywhere very common, and several are extremely rare, and our knowledge of their history is quite imperfect.

The WORM-EATING WARBLER, (*Helminthus vermivorus*, Bonap.,) though somewhat common in some of the Middle and Southern States, is quite rare in New York and New England. This species winters in Mexico and tropical America, reaching Louisiana about the first of April, and slowly proceeds northward to breed. Audubon mentions having found them more numerous in New Jersey than elsewhere. Its food is said to consist of caterpillars and spiders; of the latter it is said to be extremely fond. Audubon describes the nest as being built externally of dried moss and the green blossoms of hickories and chestnut trees, and neatly lined within with fine fibrous roots. The structure is commonly placed among the twigs of a low bush. The eggs are four or five, cream-colored, with a few reddish dots at the larger end.

The length of this species is five and one-fourth inches; alar extent, eight. Above fine olive, streaked on the head with black; beneath, dull buff, approaching orange on the breast, and waved with dusky lines on the vent.

The SWAINSON'S WARBLER, (*Helminthus Swainsonii*, Bonap.,) was discovered by Backman in 1832, near Charleston, S. C., and first described by Audubon in the second volume of his *Ornithological Biography*. It is exceedingly rare, and seems to be a southern species. De Kay, however, includes it among the birds of New York, and alludes to its having been seen in Massachusetts by Mr. Samuel Cabot, while Baird thinks it "hardly probable" that it has been seen as far east as this State. Its history remains incomplete. Mr. Backman "invariably found them in swampy, muddy places, usually covered with more or less water;" and observes that he found fragments of coleopterous insects in their gizzards, as well as small worms. Its notes are described as "loud and clear, and more like a whistle than a song," on which account it has been called the *Whistling Warbler*.

Length five inches and a half; extent, eight and a half. Above dull olive green, on some parts tinged with reddish; beneath, and line over the eye, white.

The BLUE-WINGED YELLOW WARBLER, (*Helminthophaga solitaria*, Cab.,) winters in tropical

America, but is found in summer throughout the eastern parts of the United States, reaching Pennsylvania in its northward migration early in May. On its first arrival, like many other of our Warblers, it frequents gardens and orchards, gleaning among the blossoms for those destructive insects that help make up its food, and afterwards retires to the more sequestered forests to spend the summer and rear its young. Its nest, which is quite peculiar, Wilson observes, "is fixed in a thick bunch or tussock of long grass, sometimes sheltered by a briar bush. It is built in the form of an inverted cone, or funnel, the bottom thickly bedded with dry beech leaves, the sides formed of the dry bark of strong weeds, lined with fine, dry grass. These materials are not placed in the usual manner, circularly, but shelving downwards on all sides from the top; the mouth being wide, the bottom very narrow, filled with leaves, and the eggs or young occupying the middle. The female lays five eggs, pure white, with a few very faint dots of reddish near the greater end." It seems to be quite rare in this State.

Length four inches and three-fourths; extent, seven. Above, green olive; lower parts yellow; lars black; inner vanes of the outer tail feathers, white; two bars of white across the wings.

The GOLDEN-WINGED WARBLER, (*Helminthophaga chrysoptera*, Cab.,) is said by De Kay to be rare in New York, as it likewise appears to be in New England, though it has been seen as far northward as 50°; it has been seen as far south as Bogota in South America, and known to spend the winter in Mexico. It is regarded as a rare species, and its history still remains very imperfect. Its habits are said to considerably resemble those of the Titmice, but more nearly those of the Worm-eating Warbler described above.

This neat and pretty species measures five inches in length, and seven in extent. Color above, dark bluish grey; crown and wing coverts golden yellow; band through the eye, chin and throat, black; lower parts white; inner webs of the three primary tail feathers white. Female, similar but duller.

The NASHVILLE WARBLER, (*Helminthophaga ruficapilla*, Baird,) seems to be fast becoming a common species in many sections of New England, though formerly regarded as so rare. Wilson, who first described it, in 1811, saw but three individuals; Audubon, in 1832, had seen but three or four, and Nuttall probably had not met with it at the same date, though he observes it had been seen near Salem, in this State. De Kay, some twelve years later, mentions it as "exceedingly rare," and gives us no further information of its history. It has now come to be a common species in collections of the birds of this State. For several years past I have seen scores of them every May, frequenting the orchards and gardens, actively gleaning among the blossoms of the fruit trees, as well as in the thickets and forests; and in 1861, many lingered in the deep woods till into June, and I began to expect them to remain all the summer. It has been found to range throughout eastern North America to Greenland, but I am unable to find any account of its nest, the older writers on American Ornithology merely consigning it to the northern parts of the continent to rear its young, in common with numerous oth-

er species of whose summer homes they were equally ignorant. It probably will be found, however, to exist in the northern Alpine parts of New England during that season, having myself shot a male of this species in Weathersfield, Vt., August 16th, 1860; it was then in the midst of its moult, and instead of manifesting that uneasiness characteristic of these birds during their migrations, it seems like a bird perfectly at home, and I doubt not had spent the summer in that vicinity.

Length four and a half inches; alar extent, seven. Above, yellow olive; head and neck, ash; crown, deep chestnut; beneath, greenish-yellow, brightest on the throat and breast.

The ORANGE-CROWNED WARBLER, (*Helminthophaga celata*, Baird,) was first described by Lay, in 1823, who discovered it while travelling with Major Long's expedition to the Rocky Mountains. Audubon gives us an interesting account of its habits, he having found them breeding in the eastern parts of Maine, and in New Brunswick and Nova Scotia. "Its nest," he observes, "is composed of lichens detached from the trunks of trees, intermixed with short bits of fine grass, and is lined with delicate fibrous roots and a proportionally large quantity of feathers. The eggs, which are from four to six, are of a pale green color, sprinkled with small black spots. The nest is placed not more than three to five feet from the ground, between the smaller forks of some low fir trees. Only one brood is raised in the season, and the birds commence their journey southward from the middle of August to first of September."

It ranges from the Atlantic to the Pacific, and southward to Northern Mexico. "In the summer months," says Audubon, "it manifests a retiring disposition, keeping among the low brushwood that borders the rivers and lakes of the northern districts; while, in the South, however, where it is rather common near the seashore, it is less cautious, and is seen, in considerable numbers in the orange groves around the plantations, or even in the gardens, especially in East Florida."

Length five and a half inches; extent, eight. Above, greenish olive; fulvous spot on the crown; beneath, olive yellow, brighter on the vent.

The TENNESSEE WARBLER, (*Helminthophaga peregrina*, Baird,) is another rare species of Warbler, of whose history, we, at present, know but little. It has been seen in this State, and is also rarely met with in New York. Its habits, as far as known, are similar to those of its congeners, feeding on caterpillars and small insects. Its breeding habits are probably yet unknown. It was first discovered by Wilson, some fifty years since, in the State of Tennessee, and hence its name.

The length of the Tennessee Warbler is about five inches, and it is eight in alar extent. Upper parts yellow olive: throat and breast, pale cream color, fading into white on the lower parts. Within the last year, I have met with several individuals of this species at Springfield.

NASHVILLE WARBLER.—Since the above was written, some days since, it has been my good fortune to discover a nest of this species. The nest was placed on the ground, in the side of a bank, which was overgrown with bushes and coarse plants. It was built of fine roots and grass, nicely lined with hair, covered externally with green

moss, and so placed as to be protected above by the dead weeds and grass, though not properly an arched nest. The eggs were four, white, and thickly sprinkled over the greater end with reddish brown specks. The nest was discovered of the 31st of May.

BLACK AND WHITE CREEPER. In No. 18 of this series, it was stated, on the authority of Audubon, (Vol. 1, p. 452,) that this species builds in hollow trees. It also builds in other and various situations, frequently openly on the ground, like many other birds, as I have had the pleasure of observing.

J. A. A.

Springfield, June, 1862.

RECEIPTS FOR HARD AND SOFT SOAP.

A correspondent, in the *Germantown Telegraph* offers the following receipt as one to be perfectly relied on:

Take ten pounds of soda ash, and dissolve it in twenty gallons of soft water, with twelve pounds of fresh lime and three-fourths of a pound of rosin, by boiling them all half an hour, stirring the while to keep them from setting or burning; then pour all the contents into a tub to settle, washing your kettle clean. After these contents have settled, take the clear water that comes on the top and put it in the kettle; now hunt up all your fat and skins, till you get about twenty-three pounds—if clear not quite so much—put over the fire to boil till all the fat is eaten up: perhaps it will take two hours, or not nearly so long; then take fine salt to divide, and add salt till the hard soap comes on the top. It will at first look like froth, and the waste will look very dark in the bottom of the kettle. Pour all out in a tub. I forgot to say, fill up your tub with cold water after taking off the first clear lye, ready to boil your soap-froth with the second time; put two good bucketfuls of this clear lye in the kettle, then with an iron ladle take all this soap froth off the top of the tub and put it in with these two buckets of lye-water, to boil again a few minutes, to make your hard soap clear and nice, adding salt till it separates well. Then pour all out in a tub, to remain undisturbed over night. In the morning you will have over thirty pounds of as nice white soap as you will wish, for either washing or toilet use, which will not chap the hands at any time. Again, if you would wish a half barrel of nice white soft soap, fill up this said lime tub again with cold water till it settles, then take the hard soap that sticks to the kettle and the pitcher that you dip out with, and three or four ladlefuls of this lye-water, and let it boil a few minutes, till it looks like soap, then fill up your kettle nearly full of the lye-water, and let it boil a few minutes, then pour it out into a vessel, and you will be much pleased with the result of your labor. This soft soap will be thick and solid, and it is very nice for boiling clothes or washing, as it makes a very nice froth.

In order to have plenty of soap fat, you must begin at the beginning to save all the skins of meat, and all the fat scraps that come from your table, which, in warm weather, should be put in some of this clear lye until you get enough to make some soap. By this course, in an ordinary family, you will always have enough soap without buying.

For the New England Farmer.

RETROSPECTIVE NOTES.

"NOTES FROM THE MONOMACK."—MUCK, AND MODEL FARMING.—Under the rather inexpressive and uninviting heading above given, in quotation marks, I find a very interesting and highly instructive communication in the *Farmer*, (*Monthly*) of July, which had previously appeared in the weekly issue of May 31st. It consists mainly of well condensed details, as to some of the more important of the opinions and practices of Mr. JOHN DAY, of *Boxford*; and contains a sufficiency of these, to prove that Mr. Day is a model farmer,—one who makes use of his head as well as his hands, a sufficiency, also, to form quite a useful addition to the stock of information needed by every farmer who is bent upon being successful and prosperous, as Mr. Day has been a sufficiency, also, to form subjects for consideration, for all who love improvement and progress so much as never to suffer any hints, derivable from the opinions and practices of good managers, to pass from the mind, without being duly pondered and practically applied. I know of one farmer who has already made some such use of several of the items of information given in this article, as to the opinions and modes of management of Mr. Day, having already entered in his *Book of the Farm*, and in that department of it, which he has entitled "Intended Improvements and Projected Experiments"—see page 214 current volume—two or three suggestions, for trial and adoption, in future operations, derived from the article now under notice. Probably others who are in the habit of jotting down, as they occur to them, notes of improvements which they intend to adopt, in their future modes of management and experiments, to be tried to test the value of some hitherto unadopted practice, may have done the same thing as the farmer just referred to, or may yet do so, on giving the article on Mr. Day a second reading.

Among the noteworthy results of Mr. Day's superior good management, the principal one, perhaps, is his improvement of his grass lands, to such an extent that where he at first cut only ten tons of hay per year, he has, for the last twelve years, averaged *one hundred tons* a year. This astonishing increase in the fertility and produce of his grass lands was accomplished by a method so simple as to be within the means of every farmer who has access to muck, though some might succeed much better than others, in imitating Mr. Day's modes of management with this inestimable fertilizer, according as *brains* were used more or less in the preparation, composting and application of it. Some, for example, for want of brains, apply muck to their land *too soon* after it has been dug, exposure to a winter's freezing and to a summer's rains and sun being, for many, or most kinds of muck, absolutely necessary to pulverize and otherwise prepare it for a beneficial inter-mixture with the soil. Some, also, would probably fail of the largest possible success in the application of muck, or muck composts, from failing to apply them at the best time. As no information is given in the article under notice, as to the time, or season of the year, when Mr. D. top-dressed his grass lands, we may here say, that, so far as some experience, of my own, and some acquaintance with the practice of others, may enable me to

judge, the best two times in the whole year for applying muck composts to grass are, first, immediately after cutting the first growth, and next, in the fall, say in October, or two or three weeks before the usual time for steady and severe frosts. At the former of these times, I have never applied any more than a *light* dressing, mainly to save the stubble and roots of Timothy from suffering from drought, and to give it a start which it is generally slow to take, applying a *heavier* dressing, well-spread, in the fall.

As Mr. Day's mode of manuring and managing his tillage lands seems just as judicious, and just as worthy of attention, consideration, and imitation, as that which he has adopted for his grass lands, and as there does not seem to be any occasion for any comments, either in the way of modification or supplement, I may now take leave of this very excellent article by saying that whoever has read it only once, has not read it half as often, and perhaps not half as considerably, as it deserves to be; and that whoever is so near to perfection in farming as to be able to find in Mr. Day's views and methods of management nothing worthy of imitation, or nothing to serve as hint or help to some improvement in his own practices, must be a model to his town or neighborhood, and one whose farm I should like to visit, or have "Saggahew" make a report of, in his next communication. All young farmers, and almost all who are not yet "already perfect," if really ambitious of making constant improvement, will find the article under notice one that will richly repay repeated perusals, and a great deal of thinking and self-application.

"PROPER LOCATION OF BUILDINGS ON THE FARM."—This, article which may be found on page 304 of July number of this journal, contains hints and thoughts which would be of great value, so far as comfort and convenience are concerned, if they could find their way into the heads of those who may be buying a farm, or putting up buildings on one, which they are to occupy for life. If the considerations here presented should fail to occur to the minds of buyers or builders in such circumstances, the result may be that they and their families may suffer some inconvenience, perhaps daily, for the rest of their lives.

When the "Hints on Buying Farms," see pages 203 and 316 current volume, get printed in pamphlet form, as proposed page 316, this article should be added as a useful appendix.

"MENTAL CULTURE."—There are some good thoughts in this article, page 315 of July number; but they are not well adapted for use among common farmers, as, for example, the suggestion that farmers should have a study, or room for themselves to read and study in. We have never seen so good a way of making a farmer and his family intelligent, as lately, in a case in which the father hears his children recite or answer questions from Wilson's Family and School Readers, and other books of Natural Science and History. Try such a plan.

MORE ANON.

WOOL EXHIBITION.—There is to be a great wool show under the supervision of the Ohio State Agricultural Society at its annual exhibition to be held at Cleveland, September 15 to 19, 1862. Competition is open to the world. Wool

will be divided into four classes: 1st. Fulling wools. 2d. Delaine wools. 3d. Cassimere wools. 4th. Combing wools. Twenty-five fleeces must be exhibited to entitle exhibitors to a premium. Mr. S. N. Goodale, of Cleveland, will have charge of this department.

SUMMER MANURES.

It has become a common practice among New England farmers to plow sward land and lay it to grass in September, without cultivating a crop upon it; and when the autumnal months are mild and moist, this course is certainly successful, if the land is properly dressed with fine, rich compost. More land would be treated in this way than there is, if the farmer could always command the manure which is indispensable, if satisfactory results are expected.

The winter stock of manure is usually exhausted on the crops planted in the spring, so that the only resource is to that which has accumulated through the summer, and what can be done as an auxiliary help by the specific fertilizers. Some persons have attempted to re-seed sward land by the use of guano, bone-dust, ashes, lime or superphosphates, but we have never known the result favorable under such circumstances. The seeds come sparingly, and when up, do not grow vigorously. But wherever there is a little well-rotted manure, a particle of muck saturated with urine or potash in some form, or a speck of rich, clayey loam, the seeds will find and cling to it tenaciously, and throw out their roots freely, which soon pass through it and down into the firmer soil. This is what they like, and should have, in order to return to us profitable crops.

The effort to obtain the largest amount of this material should never cease—not even during hoeing or the hurrying season of haying. Every available thing should be laid under contribution, and especially all the green stuff that can be collected, such as weeds, coarse grasses, and, in many pastures, brakes, and the young growth of bushes. In addition to these the droppings of the cattle, whether tied up or not, should be covered three or four times a week, or once each day would be better. When a system like this is put into practice, and steadily persisted in, the farmer will often find himself amply supplied with the necessary means of laying down his old fields to grass, and of covering them once more with the most abundant and paying crops.

The truth is, we let our grass lands run too long. We mow them year after year and get a ton of hay per acre, when the land, under a higher state of culture, is capable of yielding three tons to the acre! Would it not be cheaper to allow some of it to lie idle, or grow up to wood, than to have so much in hand?

In order to have the summer manure in proper condition for re-seeding, it must be collected into heaps and passed through a slight fermentation, such as we have described in an article in this number of the paper, in reply to the queries of a correspondent about destroying the vitality of the seeds of weeds which find their way into the manure heaps.

It is of vital importance to the farmer, never to relax his efforts in making manure. They should be systematic, not spasmodic, crowding in the material this week in undue proportion, and withholding it entirely the next. Where system is observed, and the various materials are judiciously supplied, the heap will grow in magnificent proportions, and if properly reduced from its long and crude, to a short and saponaceous condition, will amply repay the cost with more than compound interest for all the labor he has expended upon it.

Will the farmer allow us to suggest, once more, the importance to him of attending to the manure heaps *in the summer*, while materials are more abundant than at other seasons, and while the hot weather will rapidly reduce them to their best condition. Let us suggest, also, that muck is the great basis upon which his operations must mainly rest. It is, in reality, "the mother of the meal chest." Without its aid we scarcely know what course to suggest; but with it in abundance, and judiciously used, there is hardly a limit to the productiveness of our good soils.

HAY CAPS.

We sometimes hear farmers say that they cannot afford this or that on account of the cost. Do they always count the cost on both sides? We will give an instance of what seems to be true economy. Jacob P. Buswell, of Auburn, purchased 20 caps three years since. He bought the cloth, 1½ yards wide, and tore it into squares, doubling up the corners for the strings to be sewed on. During the rainy week of the last of June, he had a half acre of fine clover down. It had one day's sun, and was put into 17 stout heaps. The caps were put on, pegged down at the corners, and after a week's rain of no ordinary kind, the clover came out bright and sweet, and was put into the barn in first rate order. Now every farmer knows that it don't take a week's rain to spoil clover. Mr. Buswell's caps cost him \$4. They saved him thrice their cost in that one rain. This is what we call true economy. This year cotton cloth costs more than it did three years since, but even now it will pay to buy hay caps. Such things make the farm labor easier, they relieve its hurried and anxious hours, and enable one to feel tolerably easy in the catching rains.—*N. H. Journal of Agriculture.*

A person of uncultivated mind has no resource but in the society of others.

For the New England Farmer.

NOTES FROM MAINE.

THE SPRING DROUGHTS.—There was an unusual amount of snow fell during the past winter, but no January thaw worthy of being noted; nor during the winter was there rain to any amount. The snow went off nearly all by the warmth of the sun, aided by March and April winds, instead of March winds and April showers, as usual.

This left enormous drifts of snow in every run, gully and hollow, and frost in the ground, with cold nights and days when there was wind, or it was cloudy. Consequently, the ground was dried slowly, at first, by the cool breezes, which in early spring gave us a cold, wet, backward season, with wet, cloggy soil. But it gradually grew warmer, with scarcely any rain till it became as dry as any one, old or young, has seen in these parts at this time of the year.

The germinating seed suffered much. I examined a piece of corn, June 16, planted May 28, and found some of it up three inches, some just coming, some sprouted one to three inches, dried up and apparently dead, and some not swelled to the sprouting point, looking as bright as when planted. Sprouting and then drying has been a too frequent condition of wheat, corn and other crops. But the drought is now broken. Light rains and fine showers are spoken of in many places.

THE SEASON.—As has already been hinted, the season has been cold, windy and dry. Hardly a day but the wind has blown some part of the twenty-four hours so that a laborer, a traveller or any one, would wish it might cease. Very few hot days yet, and less hot nights. One advantage we had, teams could do full work every day, because the heat and rain did not hinder, and they were improved by every one.

Frosts were to be seen June 9 and 15, sufficient to nip the tender garden vines in many places, and here and there a corn blade; but doing slight damage, because the beans, the squashes, the cucumbers could be replanted in the gardens, while the field crops were little injured except in unfavorable places.

The crops are late, owing to the late spring and then the cold and dry weather following. There is a good breadth sown in all crops, with an increase in wheat. The choppings, that is, where the trees were cut down in the summer of 1861, could all be burned this spring and cleared up in season for wheat. On these new lands it is not so difficult to get a crop on account of the wheat midge, Hessian fly, rust and mildew, as on plowed land. The farther they are from old fields, the surer the crops. The hay crop is materially injured on dry, light land, and so it is on land laid down in 1861, not being sufficiently sodded to shield the young roots.

O. W. TRUE.

Near Phillips, Me., July, 1862.

THE FROG TRADE.—The Auburn (N. Y.) *Advertiser* says that the catching of frogs at Montezuma has become quite a considerable trade. It adds: "For three or four seasons past two men have made the impaling of frogs their business. Every other day they ship from Auburn a barrel of frogs for the New York or Buffalo market.

They make very handsome wages. The method of securing these *basso profundos* of the marshes is very similar to spearing for fish. The men paddle off through the marsh in the night with a dark lantern. They approach the haunt of the frog very quietly, and when near enough throw their dart with a certainty acquired by practice, always hitting them back of the head, killing them instantly. The hind quarters are then carefully skinned and cut off, packed in barrels, and sent to their destination. They generally secure two or three hundred in a night, and are paid \$6 a hundred.

CLOVER AND PLASTER.

A reader in Michigan wishes a little information respecting clover and plaster, which we will endeavor to give. Clover may be sown either in the autumn with winter grains, or in the spring with summer cereals, or may be sown alone or with timothy or any other of the cultivated grasses. Which is the best of these methods is not very easily ascertained; and the question has caused a good deal of discussion among practical men, and the exhibition of a great variety of experience that at first might appear contradictory. Like other questions, however, in regard to which experience seems to vary, we have no doubt the difference in the result is chargeable to difference of circumstances, such as soil, climate, exposure, amount of snow, which is valuable as winter protection, and perhaps other influences.

When clover is sown alone, from ten to sixteen pounds are used. Heavy land it is believed generally requires more seed than a light soil. It is best not to be sparing of clover seed, for where grown pretty thick the hay is finer and better. When sown with timothy, the usual quantity is from six to twelve pounds. The only way to insure a good crop all over the field, is to prepare the ground thoroughly and give plenty of seed. Spots where clover will not catch, need manure and a little more seed.

The operation of plaster is not well understood either by practical or scientific men. It has been used by some in certain locations without the least apparent benefit, and its use abandoned, while others differently situated find it the most profitable manure that can be used on clover, all leguminous plants, and the grasses. Why this is so no one can tell, though there are many theories. Experiment alone will decide where it is profitable to use plaster and where it is useless. There is great difference of opinion, too, as to the best time of sowing plaster. Some derive no benefit unless it is used in the spring after the leaves are well expanded, and think that its effect is through the leaves alone, while others are not particular on this point, and prefer to sow at the very earliest moment possible in the spring, and in this way obtain the best results. We never saw a better effect from plaster than on a field of clover in Niagara county, heavy soil, that had received a heavy dressing of plaster in the winter. A correspondent complains that using plaster on clover sown with wheat causes a heavy growth of straw, makes the wheat ripen late, and it is very much subject to rust, while without plaster the clover perishes from drought. If any of our readers know of a preventive of this state of things, we would like

to be informed. From two to four bushels of plaster is the quantity usually applied to the acre.

We have referred to the difference existing among scientific men regarding the operation of plaster, and we give the opinions of three of the most celebrated doctors.

Sir Humphrey Davy held the opinion that the influence of gypsum on clover, sainfoin, rye grass, and other plants of this character, is due to their containing naturally a large proportion of sulphate of lime. He examined the ashes of these plants, and found that they afforded considerable quantities of gypsum, which substance, he thought, might probably be intimately combined as a necessary part of their woody fibre. He believed that where gypsum failed to produce a good result, it would be found that the soil naturally contained so much of the salt, that its artificial supply was unnecessary.

Prof. Liebig's opinions are thus stated in the *Cyclopædia of Agriculture*: Prof. L. explains the action of gypsum upon grasses, by a reference to its well known power of converting the volatile carbonate of ammonia into the more fixed sulphate of the same base. When sulphate of lime is mixed with a solution of carbonate of ammonia, all ammoniacal smell soon disappears. By a mutual interchange of elements, carbonate of lime and sulphate of ammonia are formed, and the latter salt, not being volatile at ordinary temperatures, remains without loss in the liquid.

Prof. Liebig further states that "a part only of the carbonate of ammonia, conveyed by rain to the soil, is received by plants; because a certain quantity of it is volatilized with the vapor of water. Only that portion of it can be assimilated which enters deeply into the soil, or which is conveyed directly to the leaves by dew, or is absorbed from the air along with the carbonic acid."

Now it is to the power, possessed by gypsum, of converting the carbonate of ammonia into the sulphate of the same base, and thus preventing its volatilization when it has once come in contact with the soil, that Prof. Liebig partly attributes the action of gypsum as manure. We say partly, because he expressly says that "the evident influence of gypsum upon the growth of grasses, the striking fertility and luxuriance of a meadow on which it is strewed, depends, in some degree, upon its fixing in the soil the ammonia of the atmosphere, which would otherwise be volatilized with the water which evaporates." And in other parts of his well known work on Agricultural Chemistry he shows in what way plants derive the sulphur, required for the production of their albuminous constituents, either directly or indirectly, from sulphate of lime. Prof. Liebig, then, considers that gypsum acts as a source *per se* of food to plants, but still more as a means of presenting ammonia to them in greater abundance—in other words, that in applying gypsum to a soil, we are in fact manuring with an ammoniacal salt.

M. Boussingault, who advocates the third theory which we have to notice, has taken occasion, in enunciating his views, to criticise with great ability both of the preceding explanations of the action of gypsum.

In reference to Prof. Liebig's theory, M. Boussingault shows that to double the crop of clover, which a dressing of gypsum is well known to do, the whole of the rain falling during the life of the

plant must have contained 1-17000th of its weight of carbonate of ammonia; and that even allowing that this proportion of ammonia could exist in rain water, great corrections would require to be made for the quantity of rain which either does not penetrate the soil at all, or is returned to the atmosphere without passing through the plants.

Admitting, however, for the sake of argument, that the effect of gypsum upon clover, lucerne, sainfoin, &c., is really attributable, to its fixing the ammonia of the atmosphere and of rain, M. Boussingault justly asks why it is that it does no good whatever to natural pastures, and still less to root or corn crops. Theoretically it would be expected that a proportionate advantage should be derived by all crops from the ammonia so obtained, and it is a matter of notoriety that ammoniacal salts largely increase the produce of natural grasses, and form an excellent manure for wheat. These facts seem perfectly irreconcilable with the explanation offered by Prof. Liebig for the action of gypsum in agriculture.—*Rural New-Yorker*.

For the New England Farmer.

CULTURE OF THE ONION.

Yesterday I visited the grounds of P. L. Osborn, an industrious laborer of this place, and found him busily engaged, hoeing in his field of half an acre of the potato onion. Never before having particularly noticed the culture of this variety of the onion, I was induced to inquire as to the advantages of its culture. The first and most prominent advantage is, that it is less liable to be injured by the onion maggot, or destroyer, that has for several years nearly annihilated our onion crop. Mr. Osborn's field appeared vigorous and promising; and he said he hoped to obtain from it several hundred bushels. Several of his neighbors are pursuing the same course of culture. When such men thus illustrate their faith by their works there is the best of reason to hope their efforts will be successful. The boys in the *Lane* about *Wilson's Corner*, are not often observed chasing game, in a swamp, where none is to be found. If they cannot overcome the maggot in one way, they will get around it in another. They rise early, and work late, and eat the bread of carefulness. They do not wear kid gloves, except on Sundays, and then only when going to Quaker meeting. P.

South Danvers, July 19, 1862.

HOW DEEP SHOULD DRAINS BE DUG?

This is a question upon which there always has been and perhaps always will be a difference of opinion. The depth required must depend on the kind of soil, for if the soil is a hard one, on top of a hard, gravelly one, I do not find that there is much advantage in going far into the hard pan. If, on the other hand, the subsoil is loose and more easily dug, there is an advantage to be derived from going deeper.

My rule is, to gauge the drains by their distance apart. Let the depth be one-seventh of their distance asunder, and it will secure a thorough drainage. If the subsoil is hard, and the digging expensive, then do not sink the drains so deep, but place them closer together, but hold on to the above rule.

In many cases, especially where tile are used, it will be more economical to sink the drain one foot deeper, and by so doing save one-seventh of the tile; but where tile can be cheaply procured this is not always the case.

For a farm drain I prefer them about four feet deep, with an opening, formed of flat stone, in the bottom, and this covered with small stone to within twenty inches of the top; the latter are not necessary if those forming the opening are covered with reversed sods.—*Germantown Telegraph*.

EXTRACTS AND REPLIES.

RATS AND MICE.

Will you inform me of a speedy and effective method of getting rid of rats and mice?

They infest our house, which is rather an old one, from attic to cellar, and we have been unable to drive them away, though using a great number of traps, &c., and in fact, trying everything we thought might prove effectual. They cause considerable damage to milk, cream, butter and everything eatable, compelling us to cover up as carefully as possible anything we wish to preserve from destruction.

Now, if you, or any of the subscribers of the *Farmer*, can inform me of any such way, please do so, and oblige A READER AND ADMIRER.

Framingham, July, 1862.

REMARKS.—We were once troubled in the same way, loaded the double-barrelled gun, resolved upon "eternal vigilance," shot nineteen in the course of a few weeks, and had no further trouble from rats for several years. But they are great travellers, and in process of time we had them again, and being mostly from home, resorted to traps without success, and then to *strychnine*, which proved a quietus to many a poor rat. Spread it upon bread and butter and place it a short distance from the house, or under some back building, where other animals cannot reach it. By doing this they have never returned to the house to die there in the walls.

MILK-SPREADING TEATS.

Having had some experience in milking cows whose teats spread milk, and having been in all cases able to overcome the difficulty. I am disposed to give you the result. I find it to be, so far as my observation extends, a protrusion of the inside of the teat, and the remedy consists in bringing the hand quite low down so as in some measure to press *back* rather than *out*. I even let my little finger come below the teat, so as to hold it up. With a little practice this becomes quite easy, and effects the cure. E. C. PEASE.

Athol Depot, July 7, 1862.

FARRAR'S LADDER HOOKS.

I bought one of *Farrar's Ladder Hooks*, soon after seeing the illustration which you gave of it in a late number of the *Farmer*, and soon had an opportunity of using it to good advantage.

You know in what great peril my dwelling-

house was when the factory burned so near me. It was desirable to get buckets of water at once upon the roof; there were two ladders leaning against the house. I called for my Farrar's Ladder Hook; this I attached securely to the upper rounds of one ladder in a second, by turning a screw, and slid the ladder over the ridgepole. In my distress and anxiety as I dashed the water upon the smoking shingles, I blessed the simple contrivance which served me so timely. Hereafter I shall look upon Farrar's Ladder Hook as one of my safeguards against fire, as it will equip any ladder so as instantly to be thrown upon a roof.

I think I shall patch my roofs to better advantage now that I can get over them more safely.

WM. D. BROWN.

Concord, Mass., June 24, 1862.

For the New England Farmer.

MOWING MACHINES.

MR. EDITOR:—I have noticed several articles on mowing machines in your excellent journal during the last twelve months, one of which was an inquiry about Ketchum's, as to which was the best, the 1860 machine, or the 1861. I have used one of the pattern of 1860, and it gives good satisfaction. It does the work well, and is of light draft. I have a pair of horses that do not weigh more than fifteen or sixteen hundred, and they can draw the machine with ease. It is not so hard for them as ordinary plowing. I can mow an acre per hour, and where the land and grass is suitable to mow with a machine, I can commence at twenty minutes past nine in the morning, on three acres, and put it through in two-forty, and put my horses up before noon with dry coats, if the temperature of the weather is not more than 85° above zero!

The principal difference between the patterns of 1860 and 1861 is in the finger-bar. That of '60 is bolted on tight; that of '61 is connected by a hinge, so that the bar can rise over objects without tipping the driver's seat. But where the land is smooth the hinge is not necessary, and where the land is rocky, the hinge is dangerous. The weight of the bar will prevent the machine from tipping to the left; but where the driving wheel runs over a rock, or the hinge slides into a hollow, there is danger of throwing the driver over to the right, and on to the knives, while it is next to impossible to tip the stiff bar machine over to the right. I should choose the stiff bar. There are several kinds of machines in the market, and all claim to be the best. But I doubt if there is a better machine (taking all things into consideration,) than the Ketchum machine; if there is, it would pay for almost every farmer to buy one; if not, it would pay to buy one of Ketchum's, for it is better to pay ten or twelve dollars for the wear and tear, and interest on the cost of a mowing machine, than to pay twenty or thirty dollars for a man to mow, and board him at a cost of six or eight dollars more. In addition to this, grass mowed with a machine is already spread, while if mowed with a scythe, it would take as much time to spread it as it would to mow it with a machine.

Amherst, N. H., July, 1862.

D. N.

LADIES' DEPARTMENT.

OUR RECEIPT TO MAKE CURRANT WINE.

For several years we have made a ten gallon keg of currant wine, which is of as good quality as any we have tasted, and is generally so pronounced by those who have had an opportunity to judge. The mode of manufacture is simple, and can be easily followed by any family having the currants and the disposition to make the wine. For general information as well as in reply to private inquiries, we give the receipt after which we make it, and cordially recommend it.

The currants should be fully ripe when picked; put them into a large tub, in which they may remain a day or two; then crush them with the hands, unless you have a small patent wine-press, in which they should not be pressed too much, or the stems will be bruised and impart a disagreeable taste to the juice. If the hands are used, put the crushed fruit, after the juice has been poured off, in a cloth or sack, and press out the remaining juice. Put the juice back in the tub after cleansing it, where it should remain about three days, until the first stages of fermentation are over, and removing once or twice a day the scum copiously arising to the top. Then put the juice into a vessel—a demijohn, keg or barrel—of a size to suit the quantity to be made, and,

To each quart of juice add
Three pounds of the best sugar,
And water sufficient to make a gallon.

Thus, ten quarts of juice and thirty pounds of sugar will give you ten gallons of wine, and so on in that proportion. Those who do not like very sweet wine can reduce the quantity of sugar to $2\frac{1}{2}$ or 2 pounds per gallon.

The cask must be full, and the bung or stopper left off until fermentation ceases, which will be in twelve or fifteen days. Meanwhile the cask must be filled up daily with water, or what is better, currant juice left over, as fermentation throws out the impure matter. When fermentation ceases, rack the wine off carefully, either from the spigot or by a syphon, and keep running all the time. Cleanse the cask thoroughly with boiling water, then return the wine, bung up tightly, and let stand for four or five months, when it will be fit to drink, and can be bottled if desired.

All the vessels, casks, &c., should be perfectly sweet, and the whole operation should be done with an eye to cleanliness. In such event, every drop of brandy or other spirituous liquors added will detract from the flavor of the wine, and will not in the least degree increase its keeping qualities. Currant wine made in this way will keep for an age, unless it is—*drank*.—*Germantown Telegraph*.

NICE TEA CAKES.—Sift from a pint and a half to a quart of flour, and mix thoroughly through it two teaspoonfuls of cream of tartar and a little salt, then rub in a clever lump of butter. Have ready one pint of new milk with a teaspoon of soda dissolved in it, and pour this on the flour and work up as soft as you can manage to roll, and cut with cake-cutter; add more flour, if necessary, and bake in a quick oven. They soon bake, and are not so good if the dough is stiff.

DRYING THE COMMON RED CURRANT.

We copy the following method for drying the red currant. It is highly recommended, and is just in time to give it a trial.

The currants should be quite ripe when gathered, with the stems attached, and washed or rinsed effectually and drained off. Then stem them and wash them thoroughly, and to each pound of currants add a quarter of a pound of good Havana sugar; then place them in a preserving kettle over a fire until they come to a *scald heat*, when they are turned out into white earthen dishes, and exposed to the action of the sun until, by evaporation, they become hardened on the upper side. Then they are turned over, and there remain until they become so on the other side, and so alternate until they become a sort of leathery texture, when they are put away in earthen jars or boxes until wanted for use. Care must be taken to keep them from the dews of night and rains during the process of drying; finally, the utmost cleanliness should be observed from first to last.

When used, enough hot water is required to dissolve them or render them to any consistency suitable for tarts, jelly, &c. At the same time, more sugar is required to make them quite palatable, which must of course be governed by taste. Currants in this way have kept well with us for three years, and the presumption is that they will keep for a longer time, if well cared for.

AMERICAN GENTILITY.

In European countries the aim at anything like gentility implies keeping one or more domestics to perform household labors; but in our free States every family aims at gentility, while not one in five keeps a domestic. The aim is not a foolish one, though follies may accompany it—for the average ambition of our people includes a certain amount of refined cultivation; it is only that the process is exhausting. Every woman must have a best parlor, with hair-cloth furniture and a photographic book; she must have a piano, or some cheaper substitute; her little girls must have embroidered skirts and much mathematical knowledge; her husband must have two or even three hot meals every day of his life; and yet her house must be in perfect order early in the afternoon, and she prepared to go out and pay calls, with a black silk dress and card case. In the evening she will go to a concert or a lecture, and then, at the end of all, she will very possibly sit up after midnight with her sewing-machine, doing extra shop-work to pay for little Ella's music-lessons. All this every "capable" New England woman will do, or die. She does it, and dies; and then we are astonished that her vital energy gives out sooner than that of an Irishwoman in a shanty, with no ambition on earth but to supply her young Patrick with adequate potatoes.—*T. W. Higginson*.

FRUIT WAFERS FOR DESSERT.—Take currants, cherries, apricots, or any other fruit; put them into an earthen jar in a kettle of water, and when scalded strain them through a sieve; to every pint of juice add the same weight of finely sifted sugar and the white of a small egg; beat all together

until it becomes quite thick ; then put it upon buttered paper in a slow oven ; let them remain until they will quit the paper, then turn them, and leave in the oven until quite dry ; cut them into shape, and keep them between paper in a box near the fire.

ABOUT RASPBERRIES.

These may be preserved wet, bottled, or made jam or marmalade of, the same as strawberries. Raspberries are very good dried in the sun or in a warm oven. They are very delicious stewed for table or tarts.

RASPBERRY JAM.

Weigh the fruit, and add three-quarters of the weight of sugar ; put the former into a preserving pan, boil, and break it ; stir constantly, and let it boil very quickly ; when the juice has boiled an hour, add the sugar and simmer half an hour. In this way the jam is superior in color and flavor to that which is made by putting the sugar in at first.

RASPBERRY WINE.

Bruise the finest ripe raspberries with the back of a spoon ; strain them through a flannel bag into a stone jar ; allow one pound of fine powdered loaf sugar to one quart of juice ; stir these well together, and cover the jar closely ; let it stand three days, stirring the mixture up every day ; then pour off the clear liquid, and put two quarts of sherry to each quart of juice, or liquid. Bottle it off, and it will be fit for use in a fortnight. By adding Cognac brandy instead of sherry, the mixture will be raspberry brandy.

RASPBERRY CREAM.

Rub a quart of raspberries, or raspberry jam, through a hair sieve, to take out the seeds, and then mix it well with cream ; sweeten with sugar to taste ; put into a stone jug, and raise a froth with a chocolate mill ; as your froth rises take it off with a spoon, and lay it upon a hair sieve. When you have got as much froth as you want, put what cream remains into a deep china dish or punch bowl, and pour your frothed cream upon it, as high as it will lie on.

AMERICAN BABIES.—I must protest that American babies are an unhappy race. They eat and drink just as they please ; they are never punished ; they are never banished, snubbed and kept in the background as children are kept with us ; and yet they are wretched and uncomfortable. My heart has bled for them as I have heard them squalling by the hour together in agonies of discontent and dyspepsia. Can it be, I wonder, that children are happier when they are made to obey orders and are sent to bed at six o'clock, than when allowed to regulate their own conduct ; that bread and milk is more favorable to laughter and soft childish ways than beef-steak and pickles three times a day ; that an occasional whipping, even, will conduce to rosy cheeks ? It is an idea which I should never dare to broach to an American mother ; but I must confess that after my travels on the western continent my opinions have a tendency in that direction. Beef-steaks and pickles certainly produce smart little men and women. Let that be taken for granted. But rosy laughter and winning childish ways are, I fancy, the produce of bread and milk.—*Anthony Trollope.*

THE CATTLE MARKETS FOR JULY.

The following is a summary of the reports for the four weeks ending July 24, 1862 :

NUMBER AT MARKET.

	Cattle.	Sheep and Lambs.	Shotes and Pigs.	Live Fat Hogs.
July 3.....	1382	8125	500	400
" 10.....	1463	2078	600	400
" 17.....	1653	4078	640	300
" 24.....	1783	6160	300	1000
	6281	20,441	2040	2100

PRICES.

	July 3.	July 10.	July 17.	July 24.
Beef cattle, $\frac{3}{4}$ lb.....	5 $\frac{1}{2}$ @ 7	5 $\frac{1}{2}$ @ 6 $\frac{1}{2}$	5 $\frac{1}{2}$ @ 6 $\frac{1}{2}$	5 @ 6 $\frac{1}{2}$
Sheep, clipped, live wt.....	3 @ 4 $\frac{1}{2}$	3 @ 4 $\frac{1}{2}$	3 @ 4 $\frac{1}{2}$	3 @ 4 $\frac{1}{2}$
Swine, stores, wholesale.....	4 @ 5	4 @ 5	4 @ 5	4 @ 5
" " retail.....	4 $\frac{1}{2}$ @ 5 $\frac{1}{2}$	4 @ 5	4 $\frac{1}{2}$ @ 5 $\frac{1}{2}$	4 $\frac{1}{2}$ @ 5 $\frac{1}{2}$
Dressed hogs.....	4 $\frac{1}{2}$ @ 5	4 $\frac{1}{2}$ @ 5	4 $\frac{1}{2}$ @ 5	4 $\frac{1}{2}$ @ 5

REMARKS.—There was a decline of $\frac{1}{4}$ c $\frac{3}{4}$ lb. on beef, the second week of July, and the market has shown a downward tendency since that time. Since the first week in the month, no Northern cattle have sold for over 6 $\frac{1}{2}$ c $\frac{3}{4}$ lb., on dressed weight, except, perhaps, one or two pairs, which were, really, extra, and there are so many corn-fed Western cattle at this market, that an animal must be very fat and well shaped to be ranked as "extra." The Northern cattle at market, July 24th, averaged very light. The early Summer drought in the Northern part of New England and Canada greatly injured the pastures, on which farmers rely for fattening their beef at this season of the year.

The market for lambs has been brisk during the month, notwithstanding the large number reported the first week. There have been but few old sheep at market this month, the great majority being lambs, many of which were small. They have sold in lots, often with a few yearlings, or an old sheep or two with the lambs, at from \$2.50 to \$3.50,—mostly from \$2.75 to \$3.25.

The market for milch cows has been dull during the month, and in fact during the season. Pretty fair cows with young calves sell for about \$30. First rate cows sell better than ordinary ones.

QUARTERLY SUMMARY.

The total number of cattle, sheep and lambs, shotes and pigs, and live fat hogs, reported for the first and second quarters of the year, ending July 24, with the average number for each week, and the respective numbers of cattle and sheep from the West, or those purchased at Albany, and from the North, or New England, including a few from Canada and Northern New York, is as follows:

	1st Quarter.	2d Quarter.	Total both Quarters.	Average per Week.
Cattle.....	16,157	16,133	32,290	1242
Sheep.....	34,961	34,797	69,758	2683
Shotes and Pigs.....	6,515	23,742	30,257	1164
Live Fat Hogs....	8,550	8,550	17,500	673
	No. of Cattle from The West.	No. of Cattle from The North.	No. of Sheep from The West.	No. of Sheep from The North.
First Quarter.....	9,118	7039	14,423	20,538
Second Quarter.....	11,039	5094	2,025	32,772
1st six months....	20,157	12,133	16,448	53,310

CURE FOR FEVER AND AGUE.—Although, like toothache, fever and ague is a disorder that many people make fun over, no one who has ever had the "shakes" and the "chills" is careless concerning the remedy for them. A gentleman who has been out among the troops on the upper Potomac, says that there is a remedy always easily found, which is much more reliable than quinine or chologogue ; and that remedy is a decoction of the common white plantain, formed by steeping the leaves in whiskey, taken before breakfast a dozen mornings in succession. The remedy is at every farm-house door, and as simple as that prescribed to Naaman by the prophet, to whom he was referred by the "little maid."—*Exchange.*



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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NOURSE, EATON & TOLMAN, PROPRIETORS.
OFFICE....100 WASHINGTON STREET.

SIMON BROWN EDITOR.
HENRY F. FRENCH, ASSOCIATE EDITOR.

CALENDAR FOR SEPTEMBER.

O, goodness, every year made new !
O, gifts, with rain and sunshine sent !
Thy bounty overruns our due,
Thy fulness shames our discontent. WHITTIER.



SEPTEMBER, the first of the Autumn Months, is again with us, and again do we witness on all hands the evidences of another of those fulfilments of the promise that "seed time and harvest shall never cease," which, while they are designed to be sufficient to stimulate hope and to encourage the putting forth of those efforts on our part which are made the condition of the promise, are not intended to be positive enough to warrant that kind of faith which seeks to manifest itself "without works." Not know-

ing, positively, whether this or that should prosper, we cast in the seed, with just enough of hope to give us courage to work bravely, and with just enough of fear to make us realize that we are but co-workers with a higher Power, on whom we are dependent for the increase, however carefully we may plant.

"O, Painter of the fruits and flowers,
We thank Thee for Thy wise design,
Whereby these human hands of ours
In Nature's garden work with Thine.
And thanks that from our daily need
The joy of simple faith is born ;
That he who smites the summer weed
May trust Thee for the autumn corn."

September is, in many respects, one of the most pleasant months of the year, being, in this

climate, an agreeable compound of summer and fall weather—of warm days and cool nights. The work of summer and the work of fall, as well as the climate of the two seasons, seems to begin and end during this month, or rather, we may say, are divided by it. The harvesting of our English grains and the gathering of our early fruits occur during the season of haying, which, in many sections of New England, includes the early part of September ; while the gathering of the later fruits, digging of potatoes and other roots, with the harvesting of the corn crop, are deferred to the next month, or to quite the last of this. The good farmer, therefore, should find in September, not a mere boundary line only, but a liberal vacation between summer work and fall work. A vacation not for idleness, not so much even for relaxation as for active efforts for the accomplishment of certain well-considered and, perhaps long deferred plans for various

LITTLE IMPROVEMENTS

about the farm and its appurtenances, for which SEPTEMBER seems to be the most favorable time in the whole year.

We do not propose at this time to advise particularly what these improvements shall be. They probably differ on nearly every farm. But this year, more especially than any other in the past history of our country, is one in which every citizen will count carefully the cost of all undertakings, while, at the same time, there are many reasons why he should take counsel of his hopes rather than of his fears.

While we would now, as we ever have done caution against inconsiderate and extravagant outlays for agricultural purposes, especially by those of limited means, we believe there is occasion this year to fear that many farmers will be over-cautious, and thus verify in their own experience the truth of the precept, that "there is that which withholdeth more than is meet, and it

tendeth to poverty." Stormy as the political horizon may appear, do not let September pass away without making some permanent improvement on the farm, or at least without doing something to make home more pleasant, and next year's work more agreeable and profitable. Something of this kind may be done at small expense. It will not cost much to plow up a small "land" of that bound out meadow, and seed it down for next year's mowing, harrowing in manure in proportion to the "heft" of the crop you wish to cut thereon for the next six or eight years. Neither will it cost a great deal of money or time to collect materials of some kind to prevent the waste of the best part of the manure in the hog-pen and cowyard, the sink, drain, privy, &c. If the old swamp is dry enough, a few days' work there will furnish an ample supply of an excellent absorbent for the whole year. If it is too wet, what say to a little bit of experience in turning running water over a portion of the grass ground, if you happen to have a stream that can be so used without too much expense; or, while waiting for the dry spell that we usually find in this month or the next, perhaps we can do something for that bushy pasture, or possibly lay up a few rods of stone wall, that will look much better and much safer than the old wooden fence that was so completely smashed down by last winter's snow.

And now for the cattle show. Never mind if it is not managed exactly to suit you. You are just the man that is wanted. Go yourself, and take your family with you, and by the influence of your word and example the "little improvements" which you desire may be effected. Farmers cannot well do without these stated times and occasions for meeting together to examine the results of each other's labor, and to talk over affairs connected with their business. Mechanics who cluster together in villages and cities, have frequent opportunities for conversation, but farmers live remote from each other, and are in danger of becoming too solitary and unsocial. There is high authority for the injunction "to do good and communicate."

For the New England Farmer.

THE WHEAT CROP.

MR. EDITOR:—Have your correspondents done much for the winter wheat crop, which is now in its harvest time? War and taxes should keep all your farmers within their own stone walls for their breadstuffs. Let them all resolve that the last week in August and first week in September shall not pass with less than two to five acres or more of wheat, as an indispensable necessity and luxury of the farm. Has the spring wheat suffered much by heavy rains, and the late broken mil-dewy weather? It is far less sure than winter grain. Practice will prove my assertion.

Brooklyn, L. I.

H. POOR.

For the New England Farmer.

THE SEASON AND CROPS.

Rarely have I known a season that gave promise of crops more abundant. To be sure, the superabundant rains have materially interfered with the making of hay, which is ever one of the most important products of New England farms; still, a large crop has grown, and most of it has been cured in the best manner practicable, under the circumstances. The introduction of mowing machines and hay caps has greatly facilitated the getting the crop, wherever their value has been known and appreciated. One of my neighbors, who cuts more than one hundred tons of hay, has got it all in, in good condition, by due attention to the time of cutting, and covering when in the field. Hay is not injured by standing in cock for several days, if properly capped; in fact, I am not sure that it is not better made so than in any other way. I cannot doubt that the expense of such caps will be saved in a single season, if properly used.

ESSEX.

August 11, 1862.

REMARKS.—Our correspondent is right in his suggestion about hay being worth more for being cured under caps. We have no doubt but it is at least ten per cent. better. Let the grass be thoroughly wilted, or half made, then cock it, cover with caps, and let it remain from 24 to 36 hours; then throw it open to the air and sun for three or four hours, and the hay will be as perfectly cured as it can be. It will not be brittle and break like so many dry twigs, nor bleached until almost colorless, but soft, fragrant, and of a cheerful, light green color, and full of *tallow* and *milk*, or what will abundantly make them. We are for progress in every thing good.

GATHERING SPONGES.

The sponge business is largely pursued at the Bahama Islands. The exports of this article now amount annually to about \$200,000. It is almost entirely the growth of the last twenty years. During that period the article has nearly quadrupled in value, and has been applied to a great variety of new purposes, especially in France.

The sponge is compressed in powerful presses and sacked like cotton. It is assorted and graded, samples being fastened to each package to show the quality.

It is fished or raked or grappled up from the clean, sandy bottom at the depth of twenty, forty, and even sixty feet, and often far out from the shore. The water is so transparent that the growing sponge is visible on the bottom.

The sponge, when first taken from the water, is black, and at once becomes offensive to the smell.

The first process is to bury it in the sand, where it remains for two or three weeks, when the gelatinous animal matter seems to be absorbed and destroyed, or eaten by the insects that swarm in the sand.

The boatmen who obtain it are paid in shares by the owners of the boats. This, therefore, becomes a precarious and semi-gambling pursuit, highly attractive to the colored population.

HOW TO ENTER UPON SCIENTIFIC PURSUITS.

The great treasure-house of nature is open to all, and the only fee demanded for inspection, is attention.

Sir J. Herschel said: "In entering upon any scientific pursuit, one of the student's first endeavors ought to be to prepare his mind for the reception of truth, by dismissing, or loosening his hold on all such crude notions as tend to mislead him." The advice is most excellent as far as it goes, and we purpose rendering it more complete, by showing how it can be followed.

Observation of nature is the only source of truth. Discursive observation is the art of noticing circumstances evident to the senses. Men who do this intentionally and carefully, with a view of acquiring a knowledge of phenomena and their causes, are distinguished for their varied knowledge, and often for their great discoveries. Shakspeare must have owed the varied facts interwoven in his delineations of human character to this source. The harnessing of the lightning by Benjamin Franklin, was doubtless the suggestion of his curious observations of things. Fulton, Arkwright, Sir Walter Scott and Cowper are well known to have been careful observers. Newton, Bacon, Hunter, Gall, and others, owe their discoveries to their powers and habits of observation and experiment. Experiment is invented observation. It is putting into operation certain supposed causes in order to observe their effects—or it may be defined as an observation, which we are at some trouble to make. It is the very foundation of scientific pursuits.

Science is reason. Art is rule. Science tells why. Art tells how. An art is a system of rules for the performance of an operation; and science explains the reasons on which the rules of art are founded. To be scientific, therefore, we must have a clear perception of this definition. To have imbibed the spirit of science, whose traits are clear distinctions, accurate classification, and a strict reference to primitive data, is to approach the apex of the inventive pyramid.

The student of science should have all his knowledge systematized and arranged. What other people have in confusion, he should have in order. The elements of knowledge are, more or less, known to all men—but in their perfect, communicable and usable state, they are known only to the scientific man. What training is to the soldier, science is to the thinker. It enables him to control all his resources, and by classification, show his powers to the best advantage. Astronomy, navigation, architecture, geometry, political economy, morals, all rest, or should rest, and do rest, if they have attained to the perfection of science, on primary facts and first principles. Every step should be measured by an axiom—every step traced to a first principle. To detect error, then, in any province of investigation, the student first looks to the primary principles on which it is based, and thus tests the legitimacy of its conclusions.

Observation, definition, classification, are the maxims of absolute necessity to every inventor; without them, no real progress can be made. These principles may not always make their appearance in formal propositions, but still they guide all our thoughts in the same manner as when a musician plays a careless voluntary upon

an instrument—he is guided by rules of music he long since became familiar with, though scarcely sensible of them now.

The natural order undoubtedly indicates, first, search for the original principle of things—then definition of terms—then systematizing or classification, and lastly, application. This habit aids not only the acquisition of knowledge, but also its retention. Around these principles, as around a standard, the thoughts naturally associate. Touch but a remote chord of any question, and it will vibrate to the central principle to which it has once been well attached. Every relative impression owns a kindred connection, and the moment one is attacked, it, like a faithful sentinel, arouses a whole troop, which, marshalled and disciplined, bear down and challenge the enemy.

What a poet once sung of the associations of childhood, is true of the associations of scientific investigation:

"Childhood's loved group revisits every scene,—
The tangled wood-walk and the tufted green,
The school's long porch, with reverend mosses gray,
Just tells the pensive pilgrim where it lay.
Mute is the bell which rang at peep of dawn,
Quick'ning my truant steps across the lawn;
Unheard the shout that rent the noontide air,
When the slow dial gave a pause to care.
Up springs at every step, to claim a tear,
Some little friendship formed and cherished here;
And not the lightest leaf but trembling teems
With golden visions and romantic dreams!"

—*Farmer, Mechanic and Cabinet.*

HOT-BEDS---HOT-HOUSES---WEEDS---MANURES.

Will you please answer the following questions through the columns of the *Farmer*, and oblige a constant reader?

1. What size glass and sash are best and most convenient for a hot-bed? What for a small hot-house, in which to start and protect early and tender plants, and how should it be built?

2. How can manure be managed so as to kill the seeds in it, and to escape the trouble of constantly hoeing and pulling weeds, especially among onions and root crops?

3. How are the early onions and peas raised, and what variety are they, that are brought early into Boston market, and sent to other places? Are the onions raised from the seeds? The peas in this market, now brought from Boston, are larger than the very early kinds raised here, such as the Dan. O'Rourke, &c.

Waterville, Me., 1862.

B. T. STEVENS.

REMARKS.—A hot-bed, merely to answer the purposes of a common family, may be constructed of two old house windows and a few pieces of unplanned boards, and the plants will be just as thrifty as under one that cost, \$20. But if you wish to engage to a more ample extent in producing early plants, it would be better to construct a hot-bed of considerable size, and of good materials,—and even then, the process of constructing the frame and sash is exceedingly simple. It consists in nailing four boards together, the width being about four feet, or just wide enough to reach across, to tend the plants, and the length extended as far as is desired. The

back board should be as much higher than the front, as will give a proper pitch to the sash for conducting off the water. Pieces of two inch stuff, should be placed in the corners, and the boards nailed to them, to keep the whole stiff. The sash should be narrow, so as to be easily moved, and run up and down, not crosswise, the glass lapping, so as not to leak. This is all that is necessary, with regard to construction; preparing the hot-bed, and managing it, require constant and careful attention.

We can give you but little aid, we fear, about "a small hot-house." All houses for the purpose of starting and growing plants, are rather expensive. A good one—not an extravagant one—will cost from six to ten dollars for each running foot, built of the ordinary dimensions, say 12 by 32 feet, or in about that proportion. A gentleman who is interested in such houses, recently informed us that he can construct a good house for less than five dollars per running foot,—one that will well answer all ordinary purposes.

Your question, in regard to the management of manure so as to kill the seeds, is an important one, as living seeds, spread with manure, not only perpetuate a useless labor, but greatly exhaust the resources of the soil, in the millions of weeds which they produce. We know of only one way to prevent their germinating, and that is through the agency of fermentation. If this process is properly conducted, we think it would not only destroy the vitality of seeds, but vastly increase the value of the manure. But it is a nice process, and few, perhaps, will be willing to give it the necessary time and attention.

The manure should be thrown into large heaps, and a lower place than the heap stands on be made near it, so as to catch all the drainage that escapes, which should be taken up and thrown over the pile two or three times each day. In throwing up the pile, place two or three smooth poles in an upright position, and throw the manure round them so that when the pile is finished these poles will stand in the midst of it. The heap must stand out doors, as the barn cellar would probably be too cool for the fermentative process to go on. After the pile has been set up for two or three days, and repeatedly saturated with its own drainage water, by drawing up one of the stakes and grasping it with the hand, the state of temperature may be ascertained. If it is found to be quite warm in some places, and cooler in others, it will become necessary to overhaul the heap, and break up and thoroughly mingle the whole. In a day or two apply the test again, occasionally drawing out a small portion to learn what its condition is. Great care must be observed not to allow fermentation to proceed too far, as "fire-fang," as it is called, would ensue, and the heap be great-

ly injured. If fermentation is kept within proper limits—and the heat of the poles and examinations of the manure itself will always determine this—the manure will become nearly black, and quite fine, and we believe the vitality of the seeds will be destroyed. In addition to this the manure is rendered more valuable in every respect by the process; it can be more easily handled and applied to the soil or crops, and it is thought by intelligent farmers that one cord of it will produce more crop the first year than two cords in the crude form in which manure is generally applied.

Will you try this process, and inform us how you succeed?

The onions which you inquire about are probably produced from what is called the "top," or "potato" onion. This produces a cluster of bulbs, or offsets, in number from two to twelve, and even more, uniformly *beneath* the soil. Or, the onions that come along so early may be obtained in the following manner: Sow the seed of common onions so late as to get little bulbs of the size of a cranberry by the last of August, then take them up carefully, and dry them, and pack away secure from frost. Quite early in the spring, as soon as the soil will permit it, plant these little bulbs in favorable situations, and they will soon produce fair sized onions.

The size of the peas of which you speak may be owing to the high culture which they receive. There are, however, several varieties which vary considerably in earliness and in size, such as the Dan. O'Rourke, Champion of England, Missouri Marrowfat, &c. &c.

TUBULAR BRICKS.

The society for improving the condition of the laboring classes in London, highly commend the use of tubular bricks for purposes of construction. According to an official statement made by the society, a size has been chosen which, with the omission of the headers, reduces, by about one-third, the number of joints, and greatly improves the appearance of the work, giving it more boldness of effect and resemblance to stone than that of ordinary brickwork. This size is twelve inches long, and three courses rise one foot in height—a size equally convenient for the workmen in the manufacture and in the use of the bricks. Nine bricks of this kind and size will do as much walling as sixteen of the common sort, while the weight of the former but little exceeds that of the latter. When passing through the machine, or in the process of drying, any number may be readily splayed at the ends for gables, or marked for closures, and broken off as required in use, or they may be perforated for the purpose of ventilation.

In one ton of cabbage there are 189 ounces of sand, 184 of salt (chloride of sodium,) 279 of sulphuric acid, 156 of phosphoric acid, 72 of magnesia, 652 of lime, 208 of soda, 661 of potash.

MANURES.

All decomposing animal matters form most energetic fertilizers, and the collection of carcasses of animals, the blood from slaughter-houses, the residue from the manufacture of preserved meat, fish, &c., are all substances which, if given to the soil, would be the source of abundant crops. But these substances are difficult to preserve. The abominable stench they give out prevents their transport to any distance by land or sea. It is also extremely difficult to remove the excess of water they contain, which insensibly augments their weight, and at the same time contributes to their more rapid decomposition.

To render blood, flesh, &c., imputrescent while desiccating and during the time necessary to keep them, but nevertheless to preserve their fertilizing properties, so that when added to the soil they may give out the putrefying elements required for the nourishment of plants, is a subject of great importance. To the solution of this problem, M. Chevallier, son of the distinguished chemist who has done so much for the advancement of industrial science and pharmacy, has lately directed his attention. M. Chevallier has found that a small quantity of acid suffices, (from two to four per cent. of the chloridine acid of commerce,) for partially drying blood or flesh without giving out sensible odor. It is highly desirable that this suggestion should be practically tested, and, if verified, generally adopted. The London-Manure Company, for instance, some time since endeavored to bring into notice an animal manure, consisting of the waste flesh of cattle imported from the River Plate, which contained 11 per cent. of nitrogen. The detestable stench of this substance, however, fully accounts for the repugnance of captains and owners in bringing it over. The adoption of some such process as that of M. Chevallier might, however, remove this objection, and bring into use this manure, which would prove nearly as valuable as the blood manure of the same company, containing about 16 per cent. of nitrogen. The quantity of animal matter at present wasted in the countries of the New World is enormous. In South America there are killed annually, for their hides alone, more than 5,000,000 head of cattle, the carcasses being left to rot. There is thus wasted not less than 500,000 tons of manure, equally rich with the best guano. On the banks and shores of Newfoundland, again, there is thrown into the sea more than 10,000 tons of waste fish and bones, besides quantities of seal blubber. On the coast of France, especially of Brittany, there exist considerable quantities of waste fish, available for manure, but which is not cared for, although equal in fertilizing properties to guano. We may estimate that it is possible to furnish to agriculture an annual quantity equal to 400,000 tons of valuable animal manure, at present lost.—*Mark-Lane Express*.

DO YOUR OWN WORK.—Enlarge not thy destiny, says the oracle; endeavor not to do more than is given thee in charge; the one prudence of life is concentration; the one evil is dissipation; and it makes no difference whether our dissipations are coarse or fine. Property and its cares, friends and a social habit, or politics, or music, or feasting—everything is good which takes away one

plaything and delusion more, and drives us home to add one stroke of faithful work. Friends, books, pictures, *lower duties*, talents, flatteries, hopes—all are distractions which cause oscillations in our giddy balloon, and make a good poise and a straight course impossible. You must elect your work; you shall take what your brain can, and drop the rest. Only so can that amount of vital force accumulate which can make the step from knowing to doing.—*Emerson*.

For the New England Farmer.

THE ADVANTAGES OF A CULTIVATED MIND.

In a former article I mentioned some of the instrumentalities by which the laboring man can become the possessor of a cultivated and intelligent mind, and a refined imagination. I now propose to show some of the advantages and benefits which are derived from a course of mental discipline, and the patient acquisition of useful and agreeable knowledge.

The question is frequently asked by honest, but ignorant people, "*What good does all this reading, study, thinking, and writing do? Show us the use of spending so much time in doing nothing, and we shall have more faith in what you say.*" I shall commence my answer to the above question by asking another. What is that, which everybody is ever either actively in pursuit of, or passively sighing for? All who understand anything of the human heart will readily answer—*happiness*.

Although the different paths in which it is sought after, are almost as numerous as the grains of sand upon the seashore, and, although some succeed in finding it, and others do not, yet every man, woman and child is always longing and striving for happiness, in some of its many forms. This yearning for happiness is implanted by Nature in every breast; and our infinitely wise and benevolent Creator has placed the means within our reach, by which we can gratify, not only our own personal desires for enjoyment, but also assist in making others happy.

As we are all seeking for happiness, is he not the wisest man who pursues the course of action which will secure to him that enjoyment which is of the purest, most satisfying, and most enduring kind? That he is, all will admit. Now it has been proved, beyond the least shadow of a doubt, by observations extending through a period of several thousand years, that the pleasures of the mind are far superior to those of the body; in other words, the happiness which springs from the exercise and cultivation of our mental faculties, is as much greater and more lasting, than mere physical or animal enjoyment, as man is superior to the brutes, or as the soul surpasses the body in importance and duration. Here, then, is one of the greatest reasons why we should endeavor, by every means within our power, to strengthen and enlarge our mental powers; for by so doing, we can increase our capacities for happiness and usefulness to an unlimited extent.

This exercise and training of the mind, is an irksome and difficult task to a vast number of persons; but this fact is no argument against such a practice. Physical exercise and labor is also dis-

agreeable to many individuals, but who does not enjoy the blessings of his own labor, or that of others? But the exercise and improvement of the mind is not always irksome and unpleasant. What seems, at first, a hard and wearisome task, if persevered in, finally becomes a positive and fascinating pleasure, beside which all physical enjoyment is dull, insipid, and unsatisfying.

Mental culture brings along with it so many advantages, blessings and enjoyments that they cannot be numbered; and in attempting to describe them faithfully, I should be at a loss to know where to begin or end. My limits will not permit me to mention, only in general terms, the advantages which individuals and nations, of cultivated intellects, possess over the ignorant and illiterate.

In the common affairs of life, we all know and have felt the importance of knowing how to do a thing; indeed, without the requisite knowledge, we can do nothing in a proper manner, but are extremely liable, and almost always do fail in every undertaking. "Knowledge is power;" and he, who possesses the greatest amount and variety of it, and knows how to apply it to practical and useful purposes, has an advantage over the ignorant, similar in kind, if not in degree, to that which man holds over the brute creation. A thorough knowledge even of the most familiar natural objects, or of the most common pursuits of life, cannot in every, if in any, instance, be acquired simply by our own observations, or by the verbal communications of others. In the acquisition of any particular kind of knowledge, we must not only observe, study, and think ourselves, but make use of the thoughts, observations, and discoveries of other minds upon the same point; and this, in most cases, can be done only through the medium of books.

I will now turn from individuals to nations, and behold the effects of knowledge and mental improvement. It is a well-known fact, that throughout the northern portion of the United States, education is much more generally diffused among the common people than it is in any other land. Here, those who cannot read and write are an exception to the general rule; but among the working classes of every other nation under the sun, he who has taken this first step in the rudiments of knowledge is an exception, and not the rule; and is regarded by his neighbors as a fortunate man.

And what is the effect upon our nation, of this acquirement, and of the power which it gives to enter the unlimited realms of knowledge? The question is easily answered. It has made us, as a people, capable of creating, and, I believe, of sustaining a form of government greatly superior, in every respect, to all others that exist, or that ever existed upon the face of the globe! A republican form of government like our own, cannot exist where ignorance prevails among the people. Such a government is founded upon the knowledge, virtue and Christianity of the people who sustain it.

Ignorance is as much opposed to true republicanism, as slavery is opposed to freedom, or darkness is to light. That there are imperfections in our present form of government, we must admit; but when slavery, that vampire upon our national prosperity and happiness, is uprooted and utterly annihilated, it will be as perfect as we can reasonably hope to make it, in the present age of the world.

The most important effects of knowledge, or mental illumination, are to be seen in its moral bearings, and the ability which it gives an individual to worship the Most High in a more intelligent, and, consequently, in a more acceptable manner. Every kind of knowledge confers advantages and blessings upon a cultivated, or well-regulated mind; but a knowledge of the natural sciences, or of the visible manifestations of God's power, wisdom and goodness, as displayed in the works of creation, is a special and powerful incentive to religious thought and feeling. But I must close, and yet the field which this subject opens before us has scarcely been entered. Who will lead us over its boundless expanse?

S. L. WHITE.

COMPARATIVE NOURISHMENT IN VEGETABLES.

So far as regards the nutritional properties of different root crops, when fed as food to animals, there has been, as doubtless there always will be, considerable difference of opinion among practical men. The following table by the distinguished chemist, Boussingault, shows the relative value of the several articles named, so far as their nutritional properties are involved. One hundred parts of the White French Bean, at a standard of 100, are equal to the following:—

Yellow Peas.....	120
Farina of Cabbage.....	140
“ “ Carrots.....	170
“ “ Wheat.....	175
Wheat.....	191
French Wheat.....	193
Rye.....	200
Farina of Barley.....	210
“ “ Potatoes.....	225
Barley.....	232
Indian Corn.....	246
Potatoes.....	1096
Carrots.....	1351
White Cabbage.....	1446
Turnips.....	2383

The author observes that, on a comparison of his experiments with the practical experience of farmers in feeding cattle, he found a most remarkable coincidence between the theoretical and practical inference. We present the table as we find it, leaving the reader to deduce his own conclusions.

FLIES ON PICTURE FRAMES.—There is no better preventive of flies soiling gilt frames than by covering them with gauze. It must be admitted, however, that many persons prefer leaving the frames exposed rather than hide them under the usual gauze covering; I would therefore suggest to manufacturers the advantage of improving the material. As at present made, the fabric is woven much closer than is necessary. The finest and most open work gossamer that could be woven, would prove effectual in preventing flies settling near any object that was covered with it. A fly's instinct prevents it going near a cobweb. I would say, then, weave your gauze as fine and as much to resemble a spider's web as possible. This would prevent the evil the housewife dreads, and at the same time would not hide any of the gilt and carved frames.—*S. Piesse.*

For the New England Farmer.

NOTES FROM THE MONOMACK.

BY SAGGAHEW.

A WALK THROUGH MY GARDEN.—The location is near the southerly edge of a bluff, which rises rather abruptly about eighty feet from the river—the ground is nearly level, and the garden faces about south-east, with no protection from the northerly winds which sweep down the valley, except a six foot close board fence. The soil is a light sandy and gravelly loam, with a substratum of sand on the north part, and of loose gravel on the south part. Both the soil and the subsoil are so porous that the opinion was freely expressed by my friends, when my trees and vines were planted, that they would “never amount to much.” Two years ago last October there was not a tree or shrub on the place, except one poverty-stricken seedling peach tree, which latter was promptly dug up and converted into fire wood. Now let us take a walk around this lot of 120 feet square and see what we can find worth noting.

GRAPERY.—This is a very cheaply built leanto, of 9 by 18 feet dimensions. Only the roof is glazed, and that is made entirely of common second-hand window sash. The cost of the whole, including the border, was not over twenty-five dollars. The border is about six feet wide, and two feet deep, and contains, besides the soil taken from the spot, about one-fourth cord of old barn-yard manure, and ten bushels of oyster shells. Six vines (layers of the previous year) were planted in this house two years ago last April, (1860.) The first year they made a moderate growth, of well-ripened and short-jointed canes. Our friends didn't expect much from such a miserly made house and border, and their expectations seemed to be fully realized. The second year the vines were allowed to bear an average of four bunches of fruit each. The grapes ripened well, and the vines made all the new growth that they were allowed. It was evident that the border, with the occasional liquid manurings, was amply nourishing for the time being. Last fall the vines were cut back to about six feet of cane each, and the border moderately top-dressed with barn-yard manure and muck compost. This spring, long after my grape friends had uncovered their own vines, the vines were set to work again, and now (July 22) the six vines show an average of twelve bunches each of good looking fruit, and appear to be in excellent condition. The only ventilation possible, is by the door at one end, and a common sash window in the back side, opening into the wood shed. Being absent myself from morning until nearly evening, the care of opening and closing the house has been attended to by my “help-meet,” and has consisted of little else than daily opening the door and window in the morning, and closing them at four or five o'clock in the afternoon. Occasionally the inside border is given a good soaking with clean water, or sink drainage, and the vines syringed.

From my experience thus far, joined with a somewhat extensive reading and observation, the conclusion is forced upon me, that the raising of excellent grapes under glass is a very simple thing, and need not be an expensive one. Of the many graperies I have visited, there is not one of them all but what were built at an unnecessarily

large expense. Having nearly completed arrangements for the erection of a new one this fall, I hope soon to be able to prove to the readers of the *Farmer* that a very little money will furnish them with a neat and complete house for growing the finest grapes.

As our friend Brown likes short articles—that's where he is just right—we must defer our notes on the out-door grapes, &c., until another time.

For the New England Farmer.

CLOVER CROPS.

MR. BROWN:—In your edition of July 12th, of weekly *Farmer*, I noticed a short piece on the cultivation of clover as fodder. The article embraced four questions which I think are of great importance to all farmers. First, as to the best kind for New England farms. What the practice is on the continent I know not, but here the farmers all follow one routine, as to seeding down, and as regards kind and quality sown. Yet, from my own observation, I should judge that the red clover did as well here as any other. There is one man on the isle who has about two and a half acres of white clover that has come in naturally; this is the first season it has been cut for fodder; so that its merits cannot be descanted on at present.

The second query, “What is the best method of producing it?” is the one I would like for you or some of your correspondents to answer particularly, and at the same time I would like to propound a question for some of them to enlighten me upon; to wit,—Would a person not get as much hay from two acres of good land, to seed down in the fall to clover, and mow first and second crops the following year, and instead of fall feeding the land turn under that feed for manure, and again seed to clover, and at the same time improve his land a little each year? If he could do so, what is the best month to do so in?

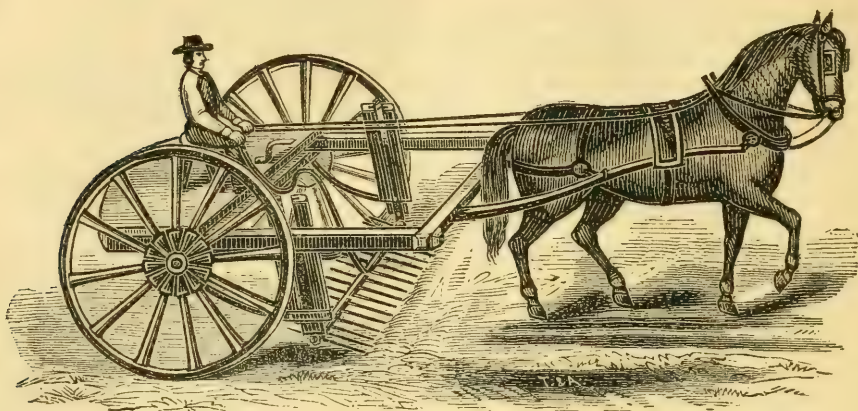
We are all now in the midst of haying, and have the promise of more than an average crop of hay. Our own and other vegetation is backward, and fears are entertained of the wheat being a total failure, on account of a little fly that has taken it. Is there any remedy for it?

Nantucket, July 1, 1862.

TOWNSHAW.

REMARKS.—We are glad that our queries in regard to the cultivation of clover crops are attracting attention. We prefer that others should answer these, and the one propounded by our correspondent, above. In the meantime, we shall improve every opportunity to converse with farmers, and endeavor to get their opinions on the questions submitted.

EXPENSIVE CEREMONY.—The expenses of the canonization of the forty Japanese martyrs at Rome amounted to nearly \$2,000,000, 70,000 of which were furnished by the Franciscans, and 30,000 by the Jesuits and Carmelites. The tapers used at the church were 35,000 in number, of the purest white wax, each weighing three pounds, and alone cost \$25,000.



REVOLVING WHEEL RAKE

We insert the above cut of "*Cogswell's Revolving Wheel Rake*," for two reasons:

1. To place before the reader who wishes to procure a horse rake, some idea of the construction of this one, better than he can gain by a mere explanation in words,—and

2. To promote the interest of an inventor who is willing to "warrant" that his machine shall "*do the work easier and better than any other rake in the market.*"

We have never seen this rake; and, of course, can say nothing of its merits; but we should be glad to test it in a quiet way in our own fields.

The proprietors say:

The rake can be mounted on common carriage-wheels, and has a spring seat for the driver. It has wooden teeth, which cannot injure the roots of the grass, and can be easily replaced if broken.

It comes directly before the driver, which is a decided improvement over any other, obviating the necessity of looking backwards.

It works with a lever, which is so constructed that the driver with one hand can raise the rake full of hay over any obstruction to the height of two feet.

It is warranted to rake hay and grain, and is well adapted to the roughest fields, and will not scrape up any dirt or stubble. It leaves the hay in good order to put up, and can be operated by a lad sixteen years of age.

FEEDING OATS TO HORSES.—The same quantity of oats given to a horse produces different effects according to the time they are administered. I have made the experiments on my own horses, and have always observed that there is in the dung a quantity of oats not digested, when I purposely gave them water after a feed of oats. There is, then, decidedly a great advantage in giving horses water before corn. There is another

bad habit, that of giving corn and hay on their return to the stable after hard work. Being very hungry, they devour it eagerly and do not masticate; the consequence is, it is not so well digested and not nearly so nutritious. When a horse returns from work, perspiring and out of breath, he should be allowed to rest for a time, then given a little hay, half an hour afterward water, and then oats. By this plan water may be given without risk of cold, as the oats act as a stimulant.

A PENMAN ON PENS.

What a pen is to be made of is still unsettled. The quill, the steel pen and the hard-nibbed gold pen, have their several advocates, and are largely used; but still every one complains that he is not suited; nothing that is good and cheap lasts. Various contrivances have been adopted for keeping steel and corrosion apart. Pens have been galvanized on Davy's plan for protecting the ship's copper, but not with good effect. Washes of all kinds have been applied; the latest we have seen being of gutta-percha, with the very improper name of the *gutta-percha pen*. Glass has been tried, but has not come into use. A correspondent inform us, that he strongly suspects that simple gold, without any hard nib, is the true material. When his nibs have come off, whether by wear or accident, he grinds the gold ends in an unskilful way into something like a practical form. He thus produces a rough pen, which is so durable that he thinks the manufacturers would do well to turn their attention to the imitation of a quill in gold. The metal is to be excessively thin, and our correspondent suspects that the best imitation of a quill would require so little gold that a pen might be sold for a shilling. This pen, he thinks, would last for six months, at least, even in the hands of a reviewer. At any rate, it is worth while to repeat, from time to time, the complaint that the world, in this prodigiously puffed and loudly lauded nineteenth century, is still without a pen.—*London Athenæum*.

For the New England Farmer.

SEASON AND CROPS IN ILLINOIS.

MR. EDITOR:—When I was spending my earlier boyhood days upon a farm in New Hampshire, I can well recollect with what pleasure I used to read the *Farmer*, and watch with interest for the notes of correspondents from the different sections of the country, and, perhaps, a few notes from the Sucker State may be of interest to some now.

This is a small rail station on the Chicago, Burlington and Quincy railroad. It contains some seventy-five dwelling-houses, three stores, one grocery, and it used to have a beer saloon—but thanks to the Sons of Temperance, it is now among the things that were,—a tin shop, three blacksmiths' shops, a wagon shop, shoe shop and two harness shops. The religious sentiments are represented by three churches, and when the village first sprung into existence, the old log school-house beside the grove not being considered commodious enough, a new one was built. That one, however, becoming wholly insufficient for educational purposes, another was completed last year, sufficiently commodious for four teachers. Two doctors and a lawyer represent the medical and legal profession.

Seven years ago the place was almost an unbroken prairie. The first settlements were made in the township about twenty-five years ago, but settlers did not come in till about the time of the opening of the railroad, six years ago. The people are mostly from the New England States and New York, though there are some Pennsylvanians; consequently it has a decided New England aspect. The prairie is all enclosed except an occasionally barren section, and also the timber land, consequently most of the farmers are obliged now to keep their cattle from running at large, if they would have them do well. There are only two or three small flocks of sheep in this vicinity.

Crops of all kinds are looking well. Wheat will begin to be fit for the reaper next week, and there will be a good crop, if harvested well. Corn is late, but doing well now, under the fine showers and warm weather. The former is selling for sixty cents per bushel and the latter for eighteen. Grain would be much higher if the freights to the Eastern markets were not so high. Haying is generally done after harvesting, though where tame grass is cultivated, it requires earlier attention.

Owing to so much wet weather, the mosquitoes are very troublesome, much more so than for several years past.

Money is more plenty than a year ago; then the banks in the State were all breaking down.

S. H. JACKMAN.

Buda, Bureau Co., Ill., 1862.

A SUBTERRANEAN RAILWAY IN LONDON.—

A subterranean railway is now in an advanced state of construction, running about four and a half miles under the city of London. It commences at Victoria Street, in the midst of what was formerly a disreputable thoroughfare, but is now a common centre for the Great Northern, the London, Chatham and Dover, and the Metropolitan lines. From that point it passes eastwardly,

having a large number of intermediate stations. On the occasion of a recent trip made through a portion of its length, the air was found to be perfectly sweet, and free from all unpleasantness or dampness. The locomotives used condense their own smoke, so that neither gas nor vapor is perceptible. The surface of the rails is made of steel. The line is made for two guages, and it is a double track throughout. The carriages will be roomy, well ventilated, and lighted with portable gas. It is expected that the road will be opened, about the middle of June.—*Scientific American.*

For the New England Farmer.

IRRIGATION.

BY JUDGE FRENCH.

Passing recently over a road which we have known for many years, endeavoring to "find books in the running brooks, sermons in stones, and good in everything," the effect of a little brook of clear water, which was made to trickle through the grass on a hillside, reminded us of the subject of irrigation. Here was a stream, which, in summer, would scarcely fill a single furrow of a sod plow, arrested in its rapid descent, and carried round a hill, at nearly a level, for some sixty rods, breaking over the little trench in which it ran, and evidently causing an increase, three or four-fold, in the crop of grass thus watered by it. Any farmer may observe the same result wherever he travels. It is true that, in most instances, the water which thus comes under our observation runs from the roadside, and we are apt to refer the fertilizing effect uniformly observed, to what we call "the wash of the road," and to give much of the credit rather to the roadside manure than to the water. The little brook to which allusion has been made, flowed directly across the highway, between two little hills, so that it gained nothing from the road; and careful observation will satisfy any one, that even the purest water, flowing over the surface of a grass-field, will ensure a good crop of hay on almost any soil. Stagnant water, on the other hand, either in the soil, or upon it, is sure death to all cultivated crops.

We will not undertake to theorize upon a subject upon which the profoundest thinkers confess themselves at fault. Theories are very good to account for facts, but facts are far safer upon which to base our practice.

Prof. Way says,—“Although the benefit to be derived from the use of water in irrigation is incontestable, the mode in which it acts has not been satisfactorily explained. That streams of water bringing down with them in suspension the fine soil of more elevated land, on receiving in their course the rich drainage of populous districts, should prove fertilizing in the highest degree, we can easily understand. But there is more difficulty in accounting satisfactorily for the

striking results which are obtained from spring water flowing clear and limpid from the very bowels of the earth."

In an excellent article on water meadows, in the *Cyclopædia of Agriculture*, the author says,—"Another question then arises,—Is clean or turbid water best? One might suppose that the latter, as abounding more in organic and inorganic manuring substances, but experience seems to declare that for grass land, the clearer the water the better." As a first proposition, we merely wish to maintain that irrigation with pure water, such as brooks or wells afford; is beneficial to grass, and to some other crops.

DO WE NEED IRRIGATION IN NEW ENGLAND?

Our climate, although cold in winter, is tropical in summer. England, where the plow may run, in many counties, every month in the year, is too cold and damp in summer for Indian corn to ripen. Irrigation is most profitable, and therefore most practical, in hot climates. We suppose it can hardly be profitable in New England, except for grass. Heat and the moisture of water not stagnant, will ensure heavy crops of grass, on any tolerable soil. Usually, two or three heavy rains in May and June, or the want of them, decide for us the question of a good crop of grass. Stagnant water may produce a crop of swamp grass, but never of good hay. Drainage, natural or artificial, and abundant moisture, though seemingly contradictory, are essential conditions of a good grass crop. We must get rid of surplus stagnating water, and supply percolating water with the air that always follows it downward, and then we may cut not only one, but three or four good crops of hay, as is done in other countries.

The Craigintinny meadows, watered by the sewage fluid of the city of Edinburgh, produce annually from 70 to 80 tons of green grass per acre, which sells on the land for from \$125 to \$175. The quantity applied, is said to be 10,000 tons per acre in all, at eighteen different times. The value of this liquid, has been heretofore stated to be about four cents per ton, reckoning what elements of fertility it contains, compared with other manure, but Prof. Voelcker has recently stated that this is an over-estimate. But even this small value of four cents per ton, makes \$400 per acre, which is more than twice the value of the enormous crop. The application of the sewage of cities to land will not pay, as a mere agricultural experiment, but connected with the necessity of getting the filth of the large towns where it can do no harm, and may do much good, the plan is worthy of attention. The question whether the people of London shall drain their sewers into the Thames, and corrupt the air so that Parliament cannot continue its sessions, or conduct it

off upon the soil for cultivation, involves other considerations than such as are purely agricultural.

But the point we desired to make, is this, that the water alone is entitled to much of the credit of these liquid manurings. Prof. Voelcker says that on well drained clay soil, irrigation with the purest water, even distilled water, if it were possible, which would contain no foreign substance, will produce very large crops of grass, and that in many cases of liquid manuring which have attracted attention, water is the most valuable constituent.

Now we do not mean to say that poor land will produce large crops with no manure but water, but we do believe that almost any dry field which produces one ton of hay may be made to produce two tons at the first cutting, and at least as much more at two subsequent cuttings, by irrigation with water only.

WHERE SHALL WE GET WATER?

In reading recently of agriculture in Algeria, now a French colony in the north of Africa, on the Mediterranean, we observed an account of one Jemmy Brown, a Jersey farmer, whom Mr. Caird had found comfortably located there on 60 acres of land, where he was cultivating wheat and market vegetables. It was watered regularly *from a well* worked by one horse, by means of which he irrigated seven acres a day. He watered his lucerne every six days, and cut it ten times a year. His vineyard needed no irrigation. We chance, also, to have before us "The Transactions of the San Joaquin Valley Agricultural Society for 1861," and find that the Californians, like the modern Algerines, have already learned the value of irrigation. The committees on orchards, vineyards and nurseries, travelled extensively through the valley, taking notes as they went. They give no connected statement on the subject of irrigation, but incidentally speak of it in many places. Some of the orchards are spoken of as "partly irrigated and partly not." One "ranch" is named, and the remark is made that the trees and vines are six years old, "irrigated with a horse-power pump from a well eighteen feet deep." Andrew Wolf's farm of 800 acres is named—500 in cultivation. The wheat yielded 37½ bushels to the acre, *volunteer* 20 bushels to the acre, raised 3,768 bushels of wheat and 2,800 of barley, cut 60 tons of hay, and grazes 120 head of cattle, &c. "The orchard and garden are irrigated by one of the improved horse-power force pumps, manufactured by Keep & Briggs, of Stockton; the well (Artesian) is 58 feet deep, throwing a continuous, full, strong, six-inch stream, affording ample water in a few hours' run each day, for irrigating the ground and supplying the stock."

On John Rich's farm, on the Sonora road, it

seems another power is used. "We counted eight *windmills* on the place for irrigating. They were of every variety, from Derrick's best, to the worst form of the 'spinning' sort." By a "volunteer" crop, we understand a second crop, which grows without sowing from the scattered seed of the former crop.

The "improvement" which we would make from these hints is this, that if it is found that it would pay in New England, we might almost anywhere sink a well which would supply all the water for irrigation. We have long had the impression that such an experiment might be very successful, where the hay crop is the chief object. Much of our land which we are obliged to plow after two or three crops of hay, might be kept permanently in mowing, by two or three waterings in May and June, and as many after the first cutting as the character of the season might demand. To do this, the field must, of course, be carefully prepared with water-furrows carried along the slopes so as to conduct the water evenly over the whole surface, and the water must be applied at the highest point. These furrows need not be deep enough to impede the mowing machine or horse rake, and the labor of superintending the irrigation would be very slight. Who will give us an experiment in irrigation from a well on this side of the Rocky Mountains? And will not our friends on the other side give us details of their successful operations in this department?

For the New England Farmer.

CLOVER IN ORCHARDS.

MR. EDITOR:—In the *Farmer* of July 12 you call for experience and opinion in relation to the management of orchards. I have a young orchard which I have always kept plowed and cultivated until this season, but find many difficulties connected with it. In addition to the extra labor and danger of breaking root and limbs and barking the trees, the fruit gets sandy, and requires a great deal of cleaning, and continued cropping with hoed crops seems to injure the growth of the trees, even if manure is applied pretty liberally. Last spring I concluded to keep the surface mellow by a liberal use of the cultivator and harrow, but the land not being quite level and a heavy shower following soon after my first experiment in this direction, there was not sufficient depth of porous earth to absorb the rain, and much of the fine rich surface soil left for "parts unknown."

With this unfavorable experience in cultivation, I intend to try seeding to grass or clover, and apply a liberal dressing of manure in September and October, which, I think, will soak into the ground and give the trees an opportunity to appropriate a fair proportion of it before the grass has time to absorb it all. I expect, also, to gain another advantage by leaving a sufficient growth on the land to retain the leaves in the fall, which I think equal to a pretty good dressing of manure. Some care will, however, be necessary to protect the trees

from mice, unless, as in my orchard, several good cats take good care of them.

Clover is supposed to derive much of its material for growth from the atmosphere, and on this account would be better for an orchard than grass. The only objection to clover, that occurs to me now, is its liability to winter-kill, and this might be obviated by sowing seed occasionally.

Ashfield, July 15, 1862. WM. F. BASSETT.

REMARKS.—Thank you, sir. We hope to get the opinion of many good farmers on this subject. It is quite probable that there is a less expensive way of managing orchards than the course now generally adopted.

For the New England Farmer.

FARMERS AND NATURAL HISTORY.

MR. EDITOR:—Your correspondent of July 19th found "many *uncandid* sneers at students of natural history who endeavor to benefit others," &c., in my communication of July 5th. I have carefully looked over that article to see on what such charges was predicated, and found nothing, in my judgment, to justify it; and as your correspondent quoted nothing to illustrate his statement, it is regarded as entirely gratuitous. It is true, I referred to the charges of ignorance, made against farmers, by students, professors and divines, and attempted to justify the tillers of the soil from the attacks of such assailants, not designing to make, neither am I aware of making, any "*uncandid* sneers," nor "*candid* sneers." [Would the latter be justifiable?]

But, says your correspondent, "If the farmer will not, or cannot study the works of nature, he must be at the mercy of every ignorant pretender." Nay, Mr. Editor, he gives such empirics no quarters. As little as he knows, he soon learns that they really know much less than he does. The farmer has learned the habits and uses of many quadrupeds, birds, reptiles, insects and plants, though quite unable to name them systematically. The learned pundit begins at once, if botany be the topic, to utter "long-jawed" names, such as *ampelocycos*, *chamænespilus*, *helminthostachys*, *pogyne*, *sciverechia*, *splenchnomycetes*, *zetragonotheca*, *hysmalobium* and *zuccagnia*; and because the farmers laugh over such a lingo, they are charged with ignorance. Let the farmers turn upon these botanical pundits, and ask them the meaning of these unmeaning sounds to them, and what is the answer? Let those who have tried it testify. The same is true of the various departments of the animal kingdom.

I remember once of asking a learned botanical professor some questions concerning the qualities and uses of certain plants with whose systematic names he seemed to be quite familiar. His curt reply was, "Such inquiries concern not the scientist." Very well, said I to myself; there are men who know nothing of the systematic names of plants, who are, nevertheless, familiar with their habits, uses and economical value. Thinks I to myself, the knowledge of the latter is greatly preferable to that of the former, for one who is to earn his food and raiment in a world where both must be had.

Admitting that your correspondent found a farmer who believed that a "rose bug" becomes a "dung fly," let this be an offset to a student of natural history, who taught that a lobster is an insect. Such cases may be few.

No farmer need open a book, or be told by students in natural history, that caterpillars can be destroyed, if taken in season. But when he interrogated these pundits about the army worm, the palmer worm, the grain aphid, &c., what did he learn of a practical nature? Just nothing at all, as was again and again demonstrated last year, with regard to some of these depredators.

Your correspondent has yet to learn that woodpeckers *do* injure *fruit* and *forest* trees; also that they are not hunting borers so far from the ground. Does he need be told that crows *do* destroy the eggs of other birds? What birds bring up their broods on caterpillars, at the rate of "from 50 to 100 a day? What kind of caterpillars are referred to? When your correspondent answers these inquiries, I have others in store for him, as he voluntarily offers, gratuitously, to teach a

FARMER.

RIPENING PEARS.

At a meeting of the Farmers' Club (September 9th) the subject of "Ripening Pears" was discussed, and while all agreed that the later sorts should be removed from the trees when hard, to be ripened in fruit rooms at their proper seasons, some preferred the summer and fall pears when ripened on the trees. Several admitted that the Seckel would ripen perfectly on the tree; but J. W. Hayes, Esq., of Newark, claimed that many, if not all the summer and fall pears, were better when so ripened, while Dr. Carpenter, and many others, stated, that with the exception of the Seckel, none of the summer or fall pears were so good when not gathered in a green state; that they became mealy, losing much of their juice by evaporation, &c.; while, if removed from the tree before losing their hardness, and ripened in proper localities, the pears were more delicious, and every way preferable. Our experience coincides with the latter opinion, for we have found that even the Bartlett is materially improved in quality by being ripened in the dark after being removed from the tree.

We are anxious for exact information on this subject, and would thank our pomological readers if they would furnish it, and also the proper dates for ripening each of the latter kinds of pears. If the Duchess D'Angouleme be placed in a warm room, and ripened at various dates, fifteen days apart, from Sept. 15th to Dec. 1st, those ripened at the latest date will be found to be far better in quality than those ripened earlier. A perfect list of the later pears, with the best dates for ripening them, would be very valuable, and would assist fruit dealers in improving the public appreciation of the finer qualities of fruits.—*Working Farmer.*

BLIGHT IN PEAR TREES.—We are sorry to learn that the "pear-blight" is making its appearance quite extensively. Some of the finest trees in our knowledge are ruined, and others badly affected. What the cause is, or what the remedy, we do not know. There are theories as to the

cause, but they fail to satisfy us. Downing says that upon the first appearance of dying leaves, they must be taken off. That is well enough, as they disfigure the tree, and we are anxious to be doing something—but it does not always arrest the disease. Will some one tell us more about it?

For the New England Farmer.

FARMERS' WIVES.

The farmer's wife is, or at least should be, the most cheerful, happy being in existence. Surrounded as she is by everything beautiful in nature, awakened every morning by the joyful caroling of the birds in the trees around the house, soothed all day by the whispering winds and balmy breezes, laden with sweet perfumes stolen from clover-field or apple blossoms, how can she be otherwise than happy? O, how from my heart have I pitied poor, pale, uneasy-minded women, living in large villages or cities, where every inch of ground was precious, and not a bird sang, but with a sort of wheezy, choked music, and the very trees looked dusty and dim!

How often in the morning, as throwing open my doors and windows to the cool morning air that came bustling in, filling every breath with pure, sweet odors from the budding trees and springing grass, have I wished my city friends could stand in the door by my side, and gaze upon the lovely scene spread out to my admiring view.

With everything so beautiful around her, woman can work hard, harder, perhaps, than she ought, but with willing hands. Everybody and everything works in the country. You cannot look even for a moment, out at the open door, without seeing some little bird very busy getting straws to build her nest, worms to feed her little fledgelings, or working industriously to teach them the use of their tiny wings, that scarce can bear their weight, or perhaps you see some merry, chirruping squirrel, adroitly stealing his stock of grain, for the winter he knows must come, sooner or later, and hiding it wisely in the decayed trunk of a neighboring apple tree.

The spirit of action is contagious. The hours glide by and so does the work, and when dinner-time arrives, instead of the pale, languid countenance you find in the city wife, as she sits down to her luxurious table, loaded with over-cooked meat, under-cooked vegetables, stale fruits and baker's bread, a brisk, cheerful face meets you at table, whereon you find ham and eggs, and Indian meal pudding and molasses, perhaps, but good, light, sweet, wheat bread, and tempting dishes of fruit, fresh from the garden, that would completely upset the equanimity of the guests at the aforesaid city table.

A farmer's wife can concoct such dishes as city folks know nothing of. With plenty of milk and eggs, there is always something in the house to eat. You can never take her so much by surprise that she will give you no invitation to stop to tea, and she is never so full of apologies because that tea is not nice enough, as to render you uncomfortable.

With a mind evenly balanced, a home made happy by her presence, a contented disposition,

wishing no change, a quiet, easy way of turning off work, the farmer's wife is a woman to be envied, and still some poor, foolish mortals presume to pity her! Pity, indeed; better bestow it where it is needed! The highest, noblest lot of woman is her home mission, and the most superior place for the exercise of her power is in the quiet home in the country, 'mid the soul-stirring beauties of nature, the handiwork of nature's God.

SARAH.

NAILS, NUTS, SCREWS AND BOLTS.

One of the component parts of a good farmer is mechanical ingenuity. Some lose half a day's valuable time, for want of knowing how to repair a breakage, which an ingenious person could do in five minutes. A team and two or three men are sometimes stopped a whole day, at a critical season, for want of a little mechanical skill.

It is well for every farmer to have at hand the facilities for repairing. In addition to the more common tools, he should keep a supply of nails of different sizes, screws, bolts and nuts. Common cut-nails are too brittle for repairing implements, or for other similar purposes. Buy only the very best and anneal them, and they will answer all the ordinary purposes of the best wrought nails. To anneal them, all that is necessary is to heat them red hot in a common fire, and cool gradually. Let them cool, for instance, by remaining in the fire while it burns down and goes out. One such nail, well clinched, will be worth half a dozen unannealed.

Nothing is more common than for a farmer to visit the blacksmith shop to get a broken or lost bolt or rivet inserted, and often a single nut on a bolt. This must be paid for, and much time is lost. By providing a supply of bolts, nuts and rivets, much time and trouble may be saved. They may be purchased wholesale at a low rate.

These should all be kept in shallow boxes, with compartments made for the purpose, furnished with a bow-handle, for convenience in carrying them. One box, with half a dozen divisions, may be appropriated to nails of different sizes; and another with as many compartments, to screws, bolts, rivets &c.

Every farmer should keep on hand a supply of copper wire, and small pieces of sheet copper or copper straps. Copper wire is better than annealed iron wire; it is most as flexible as twine, and may be bent and twisted as desired; and it will not rust. Copper straps nailed across or around a fracture or split in any wooden article, will strengthen it in a thorough manner.—*Annual Register of Rural Affairs.*

ANTIQUITY OF TIN.—Tin is one of the most ancient metals—that is, it was well known to the ancients; and it is very well established as a fact that the Phœnicians, those olden masters of the sea when Tyre was in her glory, made voyages to Cornwall, and obtained tin from the mines in that district, long before Britannia was known to the Romans. It was this tin, alloyed with copper, which formed the old bronze armor of the Asiatic warriors; and it may have been furnished also by the renowned Hiram, King of Tyre, the great architect and friend of Solomon, for the building of the first and unapproached Jewish temple.

PERSONAL EXPERIENCE IN EARNING A FARM.

Having read in the *Country Gentleman* several ways for a young man desirous of obtaining a livelihood by farming to do, I thought perhaps a few ideas I might suggest would not be out of the way. Although young and inexperienced myself, in the ways of working and by the means of which a farm is obtained, I have often heard my father speak of his experience, some of which I will briefly relate. At fifteen years his mind was fully made up to be a farmer. To that he devoted his energies, and boy though he was, was fully assured that he would never have any other vocation. At eighteen he bid adieu to father and mother, and started with nothing but an ax, which was all the kind parent could give but his blessing, and a piece of bread and cheese from the thoughtful mother. He left the parental homestead, travelled thirty miles, there found employment, and from that day to this never has known want. For the next five years he labored partly by the month, and also by working farms on shares. In those days when working a farm on shares, you boarded with the family, including washing, and had one-third of the profit. In the next five years he laid up \$500—was then married, bought a small farm for \$750, paid \$250 down, with five years to pay the balance. He worked it eight years, then sold, and was worth at that time \$2100. Worked a farm on shares for two years—was then worth \$3100. Then bought a farm for \$4500, having it so arranged that the payments would be made from the grain and meat raised on the farm. When that was paid for, sold again and bought another for \$8200. By improving in fencing and building, the farm is now worth \$13,000. Many young men, who commenced with nothing, have now good homes, surrounded with all the comforts of life. Working a farm on shares, he thinks, is quite as profitable for a young man as working by the month.—A FARMER'S SON, in *Country Gentleman*.

MANURES FOR GRASSES.

Nearly all the experiments which have been made with artificial manures for grasses indicate that, like wheat, barley, oats, etc., the grasses proper—such as timothy, rye-grass, etc.—require a large amount of ammonia. In the park at Rothamstead, which has been in grass for a great number of years, and the crop frequently made into hay and removed from the land, manures containing much ammonia were very beneficial on the grasses, while those furnishing potash, soda, and other inorganic substances, had the effect of causing clover and other leguminous plants to spring up and flourish. This effect was very marked, and the result fully sustains the deductions made from direct experiments on clover, wheat, barley, etc. We are warranted in concluding that clover and other leguminous plants require a larger amount of alkalies in the soil, than wheat and the grasses generally, while the latter require manures rich in ammonia.

Some experiments recently made in Scotland, by Thomas Ferguson, also favor this opinion. Land recently seeded with rye-grass and clover, was top-dressed with various fertilizers. Those furnishing a free supply of ammonia or nitric acid,

increased the rye-grass to such an extent, "that the clover plant was choked, and came up very thin in the aftermath." One hundred and twelve lbs. of sulphate of ammonia, costing \$4.50, gave an increase of 1,524 lbs. of hay per acre; 224 lbs. of Peruvian guano, costing \$6, an increase of 1,260 lbs.; 112 lbs. nitrate of soda, costing \$5, an increase of 1,540 lbs.; 280 lbs. of superphosphate of lime, costing \$5, an increase of 292 lbs.; while sulphate and muriate of potash gave an increase of only 30 lbs.—*Genesee Farmer*.

HEALTH OF COWS.

Good health in domestic animals is always a matter of primary importance. As bad health in parents transmits a tendency to disease in the offspring, it is important that every kind of animal we desire to continue on our farms should be kept vigorous and healthy.

As domestic animals are a source of human food, it is a matter of great importance to preserve them in a healthy condition. Diseased meat carries its qualities into the stomachs of the consumers. It is a serious objection which vegetarians urge against the use of animal food, that the bad treatment they receive renders them unhealthy.

As an unhealthy animal cannot consume food to as good advantage as a well one, it is again economical to avoid disease.

Each of these circumstances is sufficient reason for guarding with scrupulous care the health of the animals we feed; but when we derive milk from animals, it is doubly important that they be kept free from every objectionable taint. A sickly cow not only yields a diminished profit, but she yields sickly milk, and sickly in a higher degree than her flesh.

If a cow eat anything that has a strong or disagreeable odor, it appears in her milk.

If she eats anything medical, it comes out in her milk.

If she is feverish, her milk shows it.

If she has sores about her, pus may be found in her milk.

If she is fed upon decayed or diseased food, her milk, since it is derived from the food, will be imperfect. It is as impossible to make good milk from bad food, as to make a good building from rotten timber.

If there is anything wrong about her, it will appear in the milk, as that is an effective source of casting filth from her organism.—*Hallowell Gaz.*

AMERICAN EXHIBITORS IN LONDON. — The London *Times*, an habitual slanderer of this country, in an article on the American department of the great exhibition in London, closes with the remark,—"Taking the American exhibition as a whole, there is no department in which the exhibitors will reap more profit from their pains, and perhaps this is as high praise as we can pass upon it." There is a trite saying that we should "give the devil his due," and we are glad to award to the *Times* proper credit for this instance of fairness and candor.

For the New England Farmer.

CAN FARMING BE MADE PROFITABLE?

Can those who farm, thereby a profit make?

Why not, if they but farm for profit's sake?

For when our thoughts in one direction tend,

We, as a rule, attain the sought for end.

If, then, the object sought is merely gain,

The course to be pursued is pretty plain.

We first of all must keep our end in view,

In what we think and say, as well as do,

Nor ever from our purpose turn or swerve,

But make all things to that conform, subserve.

If farmers thus would live 'till life shall cease,

Would not their wealth from year to year increase?

But would the wealth thus gained or purchased, pay

For other things they lose, or throw away?

Perhaps it might, but for myself, I fear

'Twould be like Franklin's whistle, much too dear.

How much of money, what amount of wealth,

Will compensate a man for loss of health?

How great must be a farmer's yearly gain,

To counterbalance after years of pain?

How high—to what per cent., should profits rise,

To pay for disregarding social ties?

In footing up, what balance must we find,

To set against a starved and shrivelled mind?

How many bills, how large must be the roll,

For which an upright farmer sells his soul?

Can any sum attain sufficient size,

To justify so great a sacrifice?

And yet, for gain or profit even small,

We sometimes see them offered, one, or all.

But cannot those who cultivate the soil,

Without debasing, unremitting toil,

Obtain therefrom a compensation fair,

Acquire of worldly wealth their part, or share?

That is, if they conform to nature's laws,

And when results are wrong, remove the cause;

Against all wrong, adverse results contend,

And from intruding foes their farms defend.

'Tis true, as soon as plants begin to start,

The birds and bugs and worms will claim their part,—

Not only claim, but take "the lion's share,"

Unless we guard and watch with constant care.

'Tis true, the growing crops are sometimes lost,

Cut down, destroyed by late or early frost;

And when in rich and fertile vales they grow,

Are washed away, if streams their banks o'erflow;

Or if on land that's light, or hill-sides high,

May suffer drought in seasons hot and dry.

'Tis true, the farmer's fruits will sometimes fail,

Or be at least unsuitable for sale;

His stock may sicken, die of some disease,

The fox and birds of prey his poultry seize.

And greater trials too, at times, may come,

And throw their shade of sadness o'er his home.

The farmer's faith and patience thus are tried—

But farming hath a bright and sunny side,

For e'en its darker clouds are "silver-lined,"

And though their pockets all may not thus *find*,

(At least may not be lined so soft and thick,

As those of some who line them very quick,)

Still, by a process slow, but safe and sure,

They can be lined to last, through life endure.

Just *how* 'tis done, I don't pretend to know,

Nor by my *practice* other farmers show.

But some, at least, the process understand,

And make a yearly profit from their land.

What some *have* done, why may not others *do*,

If they a corresponding course pursue?

A. C. W.

Leominster, 1862.

AMERICAN HOPEFULNESS.—One of the American characteristics which most surprises the good-natured Mr. Trollope in his recent journey

through this country, is the imperturbable good humor and hopefulness of people. He meets frequently people who are ruined by the calamities of the war. They never weep, or wring their hands, or tear their hair. One man, from whom the secessionists of Missouri had taken cattle and crops, and all the fruit of the labor of years, merely remarked in a quiet way, while he picked his teeth with a bowie knife, "Yes, they have been kinder rough with me!" That was all; he had nothing else to say. Mr. Trollope thinks a genuine American never complains and never despairs. Whatever happens in the external world, says Mr. T., "the man is always there."

For the New England Farmer.

SEVENTY MILES BELOW NEW ORLEANS.

FRIEND BROWN:—It is very seldom that you have an agricultural correspondent at a point so far South as this. Perhaps the novelty of the thing will atone for any crudities found in my communication. With the warlike aspect of matters about here, the *New England Farmer* has, of course, nothing to do. If cannon-shot could only germinate, and "grape" produce grapes, what a paradise this land of swamps would become! If every sunken steamer along these shores could be transformed into a hot-house, we might defy even a Northern winter. As one of the results of my "inspection of farms" about here, I may say that green peas in March, new potatoes in May, tomatoes and carrots at all seasons, string-beans at any time, and shelled-beans never; (can't tell why;) upset my almanac completely. So far as garden supplies are concerned, this is a glorious country. I can discover nothing in the climate that should render an uninterrupted succession of garden crops at all difficult; still, they are not forthcoming; and I can only account for the fact by supposing that the natives about here, having obtained one crop, are content to wait till the year comes round again before they plant for another.

The prices of "garden-sauce" might well make a Concord farmer stare. What think you of Irish potatoes, (very small ones, too,) at \$1,00 "a bucket?"—the ratio of a bucket to a peck is a problem for you to solve. By the way, I priced some articles at a store, the other day; a bucket (water pail) 75 cents; a Shaker broom \$2,00; alum 50 cents a pound, (indispensable for settling Mississippi water.)

Just about these forts, the only specimens of stock that present themselves for examination are alligators—in any quantities and of all sizes. The only field products are water plants. Twenty miles further up the river are the sugar and rice plantations; and to a farmer who sees them for the first time, they are a curiosity. As you sail, not *by*, but *above* them, (the river being full to the top of the levee,) the straight, and almost interminable rows of sugar cane, and the bright green spread of the immense rice-fields, present a beautiful appearance. If it were not that the idea of involuntary labor forces itself continually upon the mind, this would be a paradise indeed. It is common to hear it said, that without slavery this system of agriculture could not be sustained; but I do not believe it. True, it makes one's back

ache to see rows of cane nearly a mile in length, and miles in breadth; but it must be remembered that as little or no manure is carried out upon these lands, the pest of weeds, with which in Massachusetts we have to fight such continuous battles, is almost unknown. Most of the labor is finished before the heat of the season becomes severe; furthermore the labor of "haying" is not called for; so that the aggregate of toil is less in Louisiana than in Massachusetts. The main reliance of the people along the western bank of the river between here and New Orleans, seems to be the orange and lemon crop. The amount received annually by the growers of these fruits seems incredible. Why may not the day come, when this amount shall be distributed among a free and happy yeomanry, instead of going, as it now does, into the pockets of a few slaveholders, to be spent in luxury, while the honest producers get only their food and clothing—a scanty allowance of each.

Between Forts St. Philip and Jackson and the "Passes," is a vast extent of country scarcely elevated above the surface of the river, of the greatest possible fertility, perfectly level, and at present perfectly valueless, because liable to inundation. Perhaps the time will come when this region will become one of the most productive and prosperous on the face of the earth. The climate is delicious, though at times hot. Almost every day a sea breeze tempers the heat, so that to even the partially acclimated it is not very trying. During the winter months the temperature must be delightful. The only obstacle to settlement is the danger of inundation. But this difficulty may easily be obviated. A levee, a few feet in height, would afford perfect security; and were the thing to be undertaken on a large scale, these levees might, with the aid of modern contrivances for the purpose, be erected with great facility, and at less expense than many stone walls in Massachusetts. The soil is perfectly free from roots, stones, and all other impediments; and a steam excavator would work wonders. Why may not this region become one day an American Holland? Almost all the tropical plants could be raised here; and the malaria of the swamps give place to the fragrance of orange groves. When the company is incorporated for carrying this scheme into effect, I shall feel that I am entitled to one share, for making this suggestion. B.

Fort Jackson, La., June 30, 1862.

WHAT IS HEAT LIGHTNING?—The flashes of lightning often observed on a summer evening, unaccompanied by thunder, and popularly known as "heat lightning," are merely the light from discharges of electricity from an ordinary thunder-cloud, beneath the horizon of the observer reflected from clouds, or perhaps from the air itself, as in the case of twilight. Mr. Brooks, one of the directors of the telegraph line between Pittsburg and Philadelphia, informs us that, on one occasion, to satisfy himself on this point, he asked for information from a distant operator during the appearance of flashes of this kind in the distant horizon, and learned that they proceeded from a thunder storm then raging two hundred and fifty miles eastward of his place of observation.—*Prof. Henry.*

RYE FOR BRINGING LIGHT SOIL INTO CONDITION TO PRODUCE WHEAT.

In a former volume of your excellent monthly text-book for farmers, the fact was alluded to, that for some years past, since the spirit of research and improvement (in a large degree due to Liebig's discoveries and inculcations) in agriculture more generally set in, large tracts of light, sandy land, some of it so light that it blows and drifts, in Silesia and contiguous districts in Germany, had been much improved by the growing and plowing in of successive crops of rye and lupins—the lupin being a leguminous plant, a small species of bean. It was shown, that, by plowing in these crops in succession the same season, so much humus or vegetable mold was accumulated in the soil, that its color was changed from that of a light sand to that in appearance of a darkish loam, and its quality from that of a merely ryegrowing sand to a soil producing fair crops and quality of wheat. Such, if my memory is correct, were the almost immediate results of this simple means of renovating sandy soils—means not costly, nor difficult, nor laborious, nor tedious of application, but so simple and easy of demonstration, as to be within the reach of every cultivator of a farm, however limited his means, or the extent of his possessions; a method of improving poor, light soils, so accessible and economical, that not one of us need allege any other excuse but a want of will and perseverance, if hereafter we allow our light, sandy soils to become unprofitable by reason of a deficiency of humus or vegetable mold in them.

But my object, at present, was to refer to a peculiarity of the rye plant—namely, its power of transforming silica or sand itself into its own growth and substance—*i. e.*, that of its straw.

Rye straw is stiffer than the straw of either wheat or oats, as is shown by its much taller growth, it being equally erect and more elastic than either oat or wheat straw. The greater extent of silicated surface in a crop of rye straw will probably be in excess of that of oats and wheat, for the same number of plants, in about the degree that rye straw is the taller or larger of the three. We cannot determine this with exactitude, nor is this necessary; for, though their composition is similar, wheat will not flourish on many soils, for which, in the same condition, rye does tolerably well. (It is to this fact that may, in part, be ascribed the settlement of Germans on much of the poorest and most sandy land in the West, as for instance the settlement of New Holland, Michigan, and the more extensive, though scattered one north of the Fox or Neenah river, Wisconsin. These plodding, industrious and eminently worthy citizens have been familiar with rye on sandy lands in Germany; and rye bread is their staple food in many instances—hence they can live on lands too poor to support costlier habits.) It is, however, a familiar fact that rye will flourish on soil too sandy, too deficient in vegetable mold to produce a crop, or half a one even, of wheat. The question I wish to suggest is: To what peculiar power in the rye plant is this success due? When both plants grow on similar soil, there is no essential difference in their general composition apparent. But when rye flourishes where wheat will not, where the soil is too sandy, I have long thought such success due in a considerable degree to the power

of the rye plant to dissolve silica in a greater degree than is true of wheat; because its composition, when grown, shows that it did dissolve, for it comprises more in its straw than wheat does.

One reason why wheat succeeds after the quantity of humus or vegetable matter has been increased, is undoubtedly to be found in the greater supply of ammonia or nitrogen, of which wheat requires a little more than rye, that is found as constituent of all vegetable matter in the soil. The substance of rye plowed in, supplies this necessary to wheat. But this does not explain why rye will grow where wheat fails.

If, as I suspect, the success of rye is due to a peculiar power in dissolving silica more rapidly than is true of any of our other well-known cultivated plants, then the inference suggests itself that rye is precisely the plant to prepare silica, and perhaps other minerals, for more delicately constituted plants, like wheat, oats and corn. There are certain elementary forms of mineral matter, which some plants have no power, even with the aid of the great transforming agent, oxygen, to modify or break up. This may be true as to wheat in relation to crude silica. Other plants differently constituted, in some peculiarity, have such a power. This may be true—and if it is not, I am mistaken—of rye, in relation to crude silica.

Often, silica has been changed from its crude form by the rye plant, its original crude and, to wheat, unassimilable form, has been broken up and changed, and thus reduced to a different or new form with new proportions suitable for the nutrition and growth of wheat. We know that one animal can digest and assimilate substances that are impossible of digestion with another. And the succession of different species of plants on the same soil proves something like this to be true of vegetables. If rye has this power, it may be turned to good account in bringing the crude mineral of sandy soils into a condition suitable for the nutrition and growth of wheat, which is of more general importance and value.—J. W. CLARKE, in *Genesee Farmer*.

KING BIRD versus BEES.

It is contended by many who have watched them, that the king-bird does not attack and devour bees, and by others that they do. But whenever the bird was shot and examined, no bees were found. The following fact was related to us a few days since by the observer. Happening one day to be near his bees, and in such a position that a bee could be seen at some distance in the air, going from and coming to the hive, he saw a king-bird perched upon a stake near by, who would dart from his perch among the returning bees, make a circuit and return again. This it continued to repeat. He now became fully convinced that the bird was catching and eating the bees. Upon watching the bird, however, more carefully on his return, he observed that it let something fall each time to the ground. Going to the stake where it had been perched, he found a large number of dead bees scattered upon the ground, every one of which had been burst open, the honey expelled from the sack and eaten by the bird. This accounts for no bees being found in the birds when killed, but establishes the fact that they like honey.—*Prairie Farmer*.

For the New England Farmer.

HOME DUTIES.

Would you see woman in her most lovely character, her most proper position? Then seek her not amid the dust and turmoil of city life, not beneath the glare of gas light in the crowded ball-room, or the round of shopping, calls, and gossiping, where, I am sorry so many women seem so happy, but in the sweet, quiet retreat of a farmer's home.

Home is a word that thrills the hardest heart. Ah! many a worn and weary man, now far away, fighting for his liberty, and boldly facing the enemy, without one tremor of fear, quivers as though in pain, at mention of his home, and will, when night descends in mercy over the bloody scene, weep bitter tears upon his hard, lonely cot, as he thinks of the comforts that once were his, in that beloved spot. And what makes our homes? It is woman. Sneer at her as you will, parade her failings and weaknesses before the public eye, if you choose, but for all that, it is her refining, soothing, refreshing influence, that makes home the loveliest place on earth. A man may have a place to stay, eat, and sleep in, but it is the presence of woman that makes it a home, to be sought, with eager steps, when work is finished for the day, if she exert her powers as she ought, to make it a pleasant spot.

The farmer's life is one of toil. By the sweat of his brow does he earn his bread, and ought not woman to make his resting hours as happy as hours can be, here in this weary world? Shall she not beguile him from his care, make him forget, for awhile, his corn and potatoes, and indulge in a higher enjoyment than mere tilling of the soil affords? It is for her to place the easy chair beside the inviting fire, and on the hearth the soft slippers to receive the tired feet. It is for her to draw up the little table, with its dainty, white cover, and place thereon a glowing light, the evening paper, and a tempting dish of apples, pears or nuts. With such influences, can a farmer do otherwise than forget the hard toil of the day, and revel in a pleasure the city man can never feel?

And thus, to place all the refining influences of home around the farmer's hearth, the woman, the presiding genius of the spot, must not be allowed to work too hard herself. Woman will droop and pine, grow cross and fretful, forget others in thinking of her own aches and pains, if, from the rising of the sun till late into the stillness of the night, she must work incessantly, with no hope of rest, till she finds it in her lowly grave. If there are butter and cheese to make, hired men to wait upon and cook for, and no daughters large enough to help the tired wife and mother, let her hire some one to do it.

To be sure, it will take quite a sum out of your yearly profits; but, my good friend farmer, had it not better come out of the profits, than out of the faithful companion you have chosen for life? Woman is often blamed and found fault with, for not doing more work than she is really able to perform. If woman is true to her nature, if she is such a wife as she should be, she will faithfully do all she is able, and if she come short, know, ye men who carelessly complain, that it is lack of strength, not will.

The calm of a farmer's home is just the place for love and harmony to dwell. Jars, discords, and family quarrels should never mar the lovely scene. What more beautiful than a pretty, comfortable farm-house, nestled among trees, and surrounded by fields of waving grain and rustling corn? All the better qualities of the heart must involuntarily spring forth, amid such influences. And shall it be said that woman fails to do her duty, in such a field as that? No! wives and mothers, be up and doing. Let the subduing atmosphere around you quell all fault-finding, peevishness and ill-temper, and may your influence be such, that the farmer's life may always be, as it often is, the happiest to be chosen. SARAH.

ABOUT CISTERNS.

EDS. RURAL NEW-YORKER:—In a late number of your journal some one wishes to know the best way to make a good cistern, and as I have made cisterns for the last eighteen years, I am willing to give my experience for what it is worth.

Cisterns can be made all shapes and sizes, but the best shape is round, because it is the strongest. A very good size for family use is about 7 feet deep and 6 feet wide when finished. The best way is to wall up the sides with stone laid in good lime mortar, (either stone or water lime will answer, but water lime is the best,) it should then be covered with a brick arch 8 inches thick, the arch to rise about 18 inches, in shape like a caldron kettle turned bottom side up. A place to go in and out must be left in the arch by making a frame of good plank, or plates of iron cast for the purpose, and built solid in the arch. Sixteen inches square is a good size for the opening. Other holes can be left in the arch to receive tubes to conduct in the water, to conduct off waste water, and to put in a pump if needed. The top of the arch should be 10 inches or a foot below the surface of the ground, to keep it from the frost. Another frame should now be made two inches larger than the first, and set on the top of the first one. This leaves a ledge an inch wide to receive a cover made to fit inside the top frame, and fastened, to keep out children and creeping things. It must now be plastered with two coats of good water lime mortar on the inside, and if the work is done thoroughly, you will have a cistern that will last from generation to generation.—*Rural New-Yorker*.

THE TOMATO AS FOOD.—Dr. Bennett, a professor of some celebrity, considers the tomato an invaluable article of diet, and ascribes to it very important properties:

"First, that the tomato is one of the most powerful aperients of the liver and other organs; where calomel is indicated, it is probably one of the most effective and least harmful remedial agents known to the profession. Second, that a chemical extract will be obtained from it that will supersede the use of calomel in the cure of disease. Third, that he has successfully treated diarrhoea with this article alone. Fourth, that when used as an article of diet it is almost sovereign for dyspepsia and indigestion. Fifth, that it should be constantly used for daily food; either cooked, raw, or in any form of catsup, it is the most healthy article now in use."

CAUSE OF HEALTH AND VIGOR.

The following from the Manchester (Eng.) *Alliance News*, describes the habits of a distinguished literary veteran, William Howitt, who has maintained remarkable health and vigor, both of mind and body :

I am temperate, because I have seen and felt the good policy of it. As a literary man, if I had fallen in with ordinary literary habits, I should not have been sitting here to write about the advantages of temperance. If I had lived as a majority of literary men of this age, as "a man about town : " if I had lived in town, and kept the usual late hours, and passed evening after evening in hot, crowded rooms, breathing the deadly poison of physical effluvia, gas and air deprived of its ozone ; if I had sat over the bottle at late suppers, foolishly called dinners ; and, in short, had "jollified," as my literary cotemporaries call it, I should have been gone 30 years ago.

As it is, I have seen numbers of literary men, much younger than myself, dying off like rotten sheep—some of them in their early youth, few of them becoming old. They have acquired great reputations ; for, if you take notice, they who collect about the press, and jollify with one another, and cry up one another as prodigies, are the men who become most popular, and "verily they have their reward."

They reap much money and much temporary fame, but at what price do they purchase it ? At the cost of bodily, as well as mental comfort ; at the cost of life itself. For my part, seeing the victims of "fast life" daily falling around me, I have willingly abandoned the temporary advantages of such a life, and preferred less popularity, less gains ; the enjoyment of a sound mind in a sound body ; the blessings of a quiet, domestic life, and a more restricted, but not less enjoyable circle of society.

And now a word on work. Those who imagine that I only wag a goose-quill, mistake a little. In that department, indeed, I have perhaps done as much work as any man living. Often in early years, I labored assiduously sixteen hours a day. I never omit walking three or four miles, or more, in all weather. I work hard in my garden, and could tire a tolerable man at that sort of thing. During my two years' travel in Australia, when about 60, I walked, often under a burning sun of 120 or 130 degrees at noon, my twenty miles a day for days and weeks together ; worked at digging gold in great heat, and against young, active men, my twelve hours a day, sometimes standing in a brook. I waded through rivers—for neither man nor nature had made bridges—and let my clothes dry upon my back ; washed my own linen, and made and baked my own bread before I ate it ; slept occasionally under the forest tree ; and through it all, was as hearty as a roach !

LINSEED.—A gentleman who has lately returned from the West reports that the crop of linseed oil will be very large this year, probably quadruple any previous year in Ohio, although in the vicinity of St. Louis it will not be more than double, for the reason that farmers could not procure seed enough to supply their wants at planting time. The high price of linseed last spring,

and the low price of corn, in consequence of the rebellion cutting off the Southern markets, is the cause of this great increase. The crop will be ripe about July 20, and will come into market about the 1st of August.

For the New England Farmer.

INSECTS OF MASSACHUSETTS.

MY DEAR SIR :—It gave me much pleasure to notice, in the *Farmer* of June 21, that Messrs. Crosby & Nichols have just published a large edition of "Harris on Insects Injurious to Vegetation," and have put it so low as to place it among the *cheap publications*, and bring it within the reach of every one.

Insects, as every cultivator, whether of the field or garden, the orchard or the flower-pot plant standing on the window-stool, knows by sad experience, now constitute a serious drawback on general cultivation, and unless efficient remedies are applied, they threaten still greater inroads upon the progress of labor. In order to check them, we must annihilate them, and to do this, we must not only form an acquaintance with their names, but the habits of their lives. This calls, I am aware, on the close observation and persevering labors of the farmer or gardener. Book knowledge will not effect it without these. Book knowledge, however, is an amazing good help in directing the course of observation. By treating upon the habits of its subjects, it exposes their vulnerable points, and enables the student to meet them more readily.

Many of our farmers are familiar with Dr. Harris' "Report on Insects," published in 1841, and can speak of its value as a practical scientific work. I can attest its world-wide reputation ; for that day, it stood without a parallel. But the discoveries in the science, the appearance of insects new to us, and general progress of things, (this last consideration is a noble omen,) ere a score of years had passed away, called for this new and richly illustrated edition. In consequence of the demise of the author, the preparation of the work was placed in the hands of our excellent Secretary of the Board of Agriculture, Mr. Flint, who readily gathered around him the aid of such men as Agassiz, LeConte, Uhler, Dr. Morris and many others, who were abundantly able as well as willing to add value to its pages from the stores of their own lore. With such aids it may well be supposed that the volume under consideration occupies the first position among works of the kind. The illustrations, which are numerous, are very life-like, so that a child may recognize in them, in midwinter, the butterflies he chased, or the insects that annoyed him in summer.

No library can be complete without this book. Every farmer who buys a copy will not only find it a pleasant and instructive work, but a labor-saving machine to aid him in getting rid of the insect pests that do so much to blight his hopes and ruin his labors every year. It is without doubt the most perfect work of the kind before the public.

With agricultural societies it should hold a prominent position. I know of no way in which they could give more valuable or more acceptable premiums, or advance the true objects of reward-

ing competition better than in the distribution of these books. Indeed, I have heard half-a-dozen say, already, that "that's the kind of premium they would like." Its pecuniary value to trade upon would not, of course, be as great as that of a ten or twenty dollar gold piece. It is not the object of these societies to increase one's financial funds in the amount of their prizes, but rather, to bestow memorials of merit—heir-looms, in whose web future generations may see the results of ancestral enterprise; dead capital laid up to look at and used only on holidays. Such a book is a noble reward for successful effort—a cruse of oil from which any quantity may be taken daily, yet none the less remains, and the book and its teachings go down to posterity a beautiful legacy to the worth of those who acquired it. W. BACON.

Richmond, 1862.

AGRICULTURAL IMPLEMENTS AND MACHINERY.

There are many farmers now in the daily use of approved agricultural implements and machinery, who began their business with the use of the most limited, heavy and awkward tools.

The *shovels* were made of wood, with the exception of a strip of iron across the bottom, split, so as to admit the thin, wedge-like wood, and then the iron hammered down and fastened. The extra labor required to use them must have been equal to one-third of the effort necessary to accomplish a fair day's work. When the material to be removed was wet, it would cling to the wooden blade with such tenacity as to make the work of separating it a heavy and laborious task, and frequently would entirely prevent the operator from separating it from the shovel. In consequence of this, he was not able to throw the loam or manure several feet into a cart or upon a bank, as he can with one of the smooth and light steel shovels of the present day.

The *iron-tooth rakes* were made by the village blacksmith, and were cumbersome and unwieldy things, rather better calculated for harrowing, than for raking.

The *pitchforks* were made at the same forge; they had two tines, with material enough in them for four—were without proper pitch or symmetry, and did not impart that cheerfulness and elasticity to the mind, which a light, well-balanced implement never fails to do, in the hands of an ambitious workman. The handles to both rake and fork were wrought out at the wheelwright's shop, or on the farm itself, and in their proportions corresponded with the iron parts.

The *hoe*, also, was many ounces too heavy, was uncouth in form and pitch, and so rough as to cause the soil always to cling to it when wet. This implement was also made at the village forge. The blade was formed, and then the eye hammered out on the horn of the anvil—instead of being pressed in a "die," as we believe is now done

—and then welded to the blade. The work was probably as well done as ought to be expected under the circumstances. But when done the best, the implement was anything but a convenient and pleasant tool. Its great objection, however, was its weight. A middling sized hoe, made of light and tough materials, will weigh two and a half pounds, handle and all; and such a hoe has all the strength that is necessary for use on common soils. On stony, clayey and compact land, a half pound, or even a pound more weight might be required.

Now suppose that *two ounces* extra be added to the two and a half pound hoe, and the person using it works twelve hours a day. Standing by a man hoeing on old land, we found that he averaged 50 strokes per minute, where there were no weeds to be taken out by hand. That would give 3000 strokes per hour, and 36,000 in a day of 12 hours, making an aggregate of 72,000 ounces moved during the time. Dividing this by 16—the number of ounces in a pound—we find that the man using the hoe that weighs *two ounces too much*, that is, more than is necessary, raises about 18 inches from the ground *four thousand and five hundred pounds*, or *two and one-quarter tons* per day!

It may be said that the superior weight, when once raised, will fall with more power, and cause the hoe to penetrate the soil more than if it were lighter. This may be so, but it requires greater care and strength to direct the motions of a heavy body, than a light one, and this will offset this claim. To test the advantage of having a hoe possess just the weight and strength to perform the work required of it, let the operator attach a piece of iron to his hoe, weighing two ounces, and work with it one day. Before night, he will probably feel it affecting him as does the grasshopper the tottering steps of the aged and infirm.

And so it is with all other agricultural implements and machinery. Great advances have been made in this particular. The mechanic has been into the field and tested his work there, and ascertained what was lacking and what redundant. In this way we now, undoubtedly, have the best farm implements and machinery that can be found in any nation of the world. They have so commended themselves, by their own excellence, as to break down the stern prejudices of the most exacting and fastidious. We have spoken of the hoe, only to illustrate our views of the matter; what we have said applies equally to other implements, and to machinery.

Several others among the smaller tools might be mentioned, if enough had not already been said, to show the great contrast between those used by our fathers, and those which we handle with so much pleasure and alacrity at the present time.

The most important *improvements*, perhaps—not “inventions”—have been in the *plow*. On many of our farms men may occasionally be heard relating their experience with the *old Dutch plow*, as it is called, over which they stood and subdued the stubborn glebe in their youth. We have known them to grow eloquent, even, in describing its processes in rocky land, as to how it would throw them across its handles, first on the land side and then on the plowed—until their very bones ached with the concussions. If it were on level land, free from stones, its movements would be disturbed by every pebble or variation in the compactness of the soil, so that it was forever poking its nose out of the ground when its proprietor least desired to see it!

Place it side by side, now, with one of Mr. JOEL NOURSE's iron plows, with the same power to draw them, and we think it will be found that twice as much work will be accomplished in a given time by the iron plow as can be got out of the old Dutch. The mould-boards of the old plow were of wood—but sometimes in the hands of a progressive farmer, who meant to have everything in the “top of the mode,” the mould-board would be strapped with hoop-iron, running longitudinally with the mould-board itself. This was a step in advance, allowing the plow to pass with greater ease through the soil, and requiring much less team to draw it. There are many other plows, also, of great excellence, which reduce the prime operation of plowing very considerably from its former cost.

We have said that the prejudices which have so long existed against the use of *machinery*, especially on the farm, have greatly abated. Indeed, they seem to be almost gone, for the manufacturer finds it impossible to answer the demand upon him for several articles of established excellence.

These thoughts have been suggested by listening to a conversation which occurred in the warehouse of Messrs. PARKER, GANNETT & OSGOOD, of Boston, a few days since. A gentleman came from Boxford, Mass., and ordered two Buckeye mowing machines, another from Danvers, and still one from another town. “We have not got them,” was the reply. One of the firm then said he had recently returned from the manufactory, and he found them there *eleven hundred* behind their orders!” We learn, also, that the agent of the Wood machine in Boston, has been unable to meet the great demand upon him. The Davis' Improved Ketchum has been sold freely by O. Ames & Sons, Boston, and in one or two instances at the rate of *nineteen or twenty* a day, without the aid of out-door agency. The New England machine, which is a new one, is gaining favor, and we understand has had a large sale.

We are glad to notice this spirit of progress. It will tend to preserve health, and increase the happiness and profits of the farmer and his household.

THE BLACK KNOT.

The knots are now making their appearance on the plum and cherry trees, and require attention. Those who will make a careful examination of the excrescence will be able to find small marks upon them, sometimes crescent-shaped like the *curculio* mark upon the fruit. By a very careful dissection, a minute white speck may be found in the middle of the concave portion of this crescent. This is an egg of an insect. It is believed that the egg causes this excrescence, and we suppose so, because we know that this egg becomes a grub, and burrows in and feeds upon the substance of this knot. These grubs, if raised to maturity, become so like the *curculio* that stings the fruit, as not to be distinguished from each other. Still they may be different. There are many different kinds of beetles that look much alike. The peabug and the worm in the chestnut, both look much like the *curculio*, but differ greatly in their habits.

When we cut into the little balls found growing upon an oak leaf, and find there a full-grown perfect fly, and no possible way it could have got there from without, we suppose that the parent of that fly, in some way or other, caused that ball to grow, and that it grew to afford protection and food for her young. This is a natural supposition, and is probably true, although it would be hard to prove. Acting upon such a theory as regards the black knot, we should say cut them off as soon as they appear, and you destroy the embryo insect that would cause similar knots another year.

We have seen both plum and cherry trees about this city, and indeed almost wherever we travel, perfectly deformed with these excrescences, and permitted to stand year after year, mere nurseries for spreading this evil.

Many people carefully cut off these knots early in the spring, and it is well enough to do so even then, as it certainly removes a deformity, but it then avails nothing towards getting rid of the cause.

By careful watching and prompt cutting away during the early part of July, you may keep the enemy under your control, but by neglecting them for a year or two, valuable trees, or even orchards, will become worthless.—*Newark Mercury*.

CURRENTS, TREES AND SMALL BIRDS.

As currants are now becoming ripe I would advise all those who cultivate this fruit to allow them to hang upon the bushes until they are perfectly ripe. I give this advice because I am aware that this fruit is too commonly pulled before it has attained to maturity and has become sweet and pleasant to the taste. Currants and gooseberries make most excellent wine, but not as they are usually pulled, namely, when quite sour.

If peach trees were cultivated like currant bushes by allowing them to spread out around the roots they would perhaps be more healthy and yield more regularly. I have found that leached ashes when placed around the root of a valuable fruit tree that has become in a measure decayed reno-

vates it. The soil should be removed for a space of about 20 feet in circumference around the tree, the leached ashes laid down therein to a depth of four inches and the soil then spread over this.

Of recent years worms and caterpillars have become more numerous and therefore more destructive all over the thickly settled part of the country. They injure our fruit-bearing shrubs and trees in a most serious manner, and this evil appears to increase in magnitude every year. It is my opinion that this is in a great measure due to the very general destruction of small birds, by men and boys who proceed from cities on holidays, and shoot harmless birds to obtain what they call sport. Most of these birds feed on insects and their larvæ, and they are therefore, the friends of man, keeping down insectoria. The destruction of the little birds should be prohibited by law. I recommend every man who has a garden, to put up bird houses and cultivate the society of wrens, blue birds, &c. These "warblers of the grove," feed upon moths that prey upon bee hives, and they are also enemies to the grape-vine caterpillar and many like pests of vegetation.—*Scientific American*.

LITTLE KINDNESSES.

BY ROWLAND BROWN.

Little drops of dew
Give life to fainting flowers ;
Little moments beating true
Make up this life of ours.
From the tiny acorn springs
Proudest of majestic trees ;
And from little fluttering wings
Fall the sweetest melodies.
And as little golden seeds
Glorious harvests may impart,
So will little kindly deeds
Make a Heaven of the heart.

Dost thou sometimes doubt thy strength ?
Dost thou weak and trembling feel ?
See ! the little trickling stream
Turns at last the giant wheel.
See the beauteous coral isle,
Mark those grottoes of the wave ;
They should make thee wear a smile,
And thy heart grow bold and brave !
For, like daisies from the sod
To the winter-weary heart,
So, the weakest child of God
May some thrill of joy impart.

THE DWELLING OF ANTS.

Ants, in the exotic regions, construct habitations of considerable size, and form large communities, consisting of a king and queen, soldiers and laborers. Such especially are the white ants, whose nests, formed entirely of clay, about twelve feet high, and broad in proportion, soon become clothed with grass, and when a cluster of them are placed together, they may be taken for an Indian village, and are in fact occasionally larger than the dwellings of the natives. These dome-like buildings are sufficiently strong and capacious to inclose and shelter the interior from all change of weather, and the inhabitants from the attacks of natural or accidental enemies. They are divided into a number of apartments, for the residence of the king and queen, and the nursing of their

numerous progeny ; as also for magazines or granaries, where provisions of various kinds are kept stored. The royal chamber occupies the centre of the building ; and on all sides, above and below, are arranged a kind of ante-rooms, containing both soldiers and laborers, who wait there either to guard or serve their common parents, on whose safety depends the well-being of the whole community.

HABITS OF THE SHAD.

The habits of our fish have been very little attended to in this country. Our scientific men, it is true, have been very precise in their accurate classification, and in the use of their ponderous nomenclature ; they have described our fishes even to the shape of a scale, or the number of thorns in the dorsal fin, but they have not condescended to note their habits, their food, their length of life, with all such particulars as would interest common readers, and be of use to mankind.

No fish is more valued, or more valuable than the shad ; yet but few of its habits of life are known. The books are silent, and angling gives no information. It was for a long time a commonly received opinion that the shad spent the winters in the Gulf of Mexico, and then as spring advanced, and the snow ceased running, came along the coast, and entered the rivers in succession. If this were true, there would be no uniformity, year after year, in the run of shad in each river. The very distinct varieties would all become intermingled. But each river has its own variety. Those of Connecticut river have long been known as possessing superior size and flavor to any others. The variety that seeks the Hudson as a spawning-ground is easily distinguished from ours. The fact of the distinctness of the varieties in each river tends to the belief that shad go no farther than the mouth of the stream in which they are hatched.

The habits of the shad are unlike those of other fish. As soon as the snow-water has ceased running, they press up the river as far as they can reach, in order to deposit their spawn. In following this instinct, they never stop for refreshment, or food. Whoever found anything in the maw or stomach of a shad that would indicate the nature of its food ? Whoever knew them to bite a baited hook ? They do not feed from the time they enter the stream until they sink down, thin and exhausted, into the deep places at the mouth. For this purpose of nature the shad has been preparing itself during the quiet luxuries of a winter, and has become fattened for the use of man, or, if it escape the net, for the reproduction of its species. The shad lives but a single year. It is hatched in the early summer ; descends the streams as soon as large enough ; feeds and fattens in the winter at the mouth of the stream ; ascends in the spring to deposit its spawn, and descends to die at the bottom of the ocean. This fact accounts for the uniformity in the size of the fish. A Connecticut river shad seldom goes beyond seven pounds, and the variation in size is comparatively slight. The bass, on the other hand, which is known to live many years, varies from half a pound in weight, to fifty, even in our own river. It has a longer time to grow, and shows a much greater diversity of size. These considerations have led to the conclusion that one

year was the duration of the shad's life. What was only a matter of conjecture and inference, has been lately proved by the artificial fish-breeders. Somewhere in the State of New York, one of these raisers of fish from spawn which he fed in early life with crumbled crackers strewn upon the pond where they were kept, has proved their short hold on existence. He raised them for the purpose of supplying the very large fish he had in his tanks and ponds with food. As the science of breeding fish is known more, the habits of the different species will be more easily described.—*Hartford Courant.*

For the New England Farmer.

HOW TO MAKE MANURES.

MR. BROWN:—There seems to be a desire by farmers to know what course to pursue in regard to worn-out or neglected land. My experience and observation teach me that the barn-cellar, if properly managed, is the best bank stock that a working farmer can have. A dairy farm of from twelve to twenty cows will make, from spring to November, one hundred and fifty to three hundred cart-loads of first-rate manure for fall seeding or top-dressing, if the proper materials are furnished, at a very small cost. Among these I would recommend for the stable, sawdust, where it can be had, spent tan or sand; with a bountiful supply of sand, loam, muck, or almost any other kind of earth, carted into the cellar as soon as convenient after planting. A good supply placed under the stable to receive the droppings and liquid manures, and the rest tipped up or piled up, by the side, so as to be convenient to be mixed with the manure as often as once, twice or three times a week, as circumstances will admit. There is not an industrious farmer, or one who has help, who can receive so much profit from his labor as in spending his spare hours or rainy days in levelling down his manure, and mixing in his materials, which are provided, and in this way increase the products of his farm beyond his comprehension.

HOW TO KILL SEEDS OF WEEDS.

Mr. B. T. Stephens, of Waterville, Me., asks, "How can manure be managed to kill the seeds in it, and thus escape the trouble of constantly hoeing and pulling weeds?"

In the first place, put no weeds into your barn or cellar after they have come to seed; next, allow no weeds to get ripe in your fields of corn or potatoes; sow as little English grain as possible where you intend to plant; seed down your land to grass with the corn crop, by the use of the horse-harrow, and a little use of the hoe to keep it perfectly level, and destroy the weeds. A few days in August will destroy in your hoed crops more weeds than farmers are aware of.

Northboro', July, 1862. A SUBSCRIBER.

IF YOU have an evergreen, or Norway spruce, balsam fir, American spruce, or any of the pines, and desire to make it grow more compact, just pinch out the bud from every leading branch, all around and over it. Repeat this process again next year, at this time, and your evergreen will continue thereafter to grow thickly.—*Indiana Farmer.*

For the New England Farmer.

AGRICULTURAL READING.

MR. EDITOR:—It is universally allowed by intelligent men, that the highest degree of success in any vocation is attained by those who have the best practical knowledge of the principles which underlie that calling. The experience of our predecessors, with the deeds of whose lives we are conversant, affords ample proof of this assertion. Ignorance, let our pursuit be what it may, can only lead us astray; it never can guide us in the way to prosperity. To the farmer, these truths are of the first importance, showing, as they do, the necessity of a good understanding of his business. To throw light upon the subject of agriculture, by the aid of the pen and the press, has been considered a thing superfluous, and by many actually injurious. The information handed down from father to son, was deemed amply sufficient for a successful career in farm-life. But the times have changed, and with the times, the opinions of men, in a good degree; and now the great question among our intelligent cultivators is, What are the means by which we may be enlightened in relation to our profession? This is a question applicable to the age in which we live, and the answers as various as the means are numerous.

I look upon the agricultural press as one of the most efficient aids of the farmer. Here is displayed the united talent of the theorist and the practical man. Here the accumulated knowledge of the past, augmented by the investigations of the present, is laid before us in appropriate form, and in language easily comprehended. The good, progressive farmer is a student, pushing his investigations with that devotion and intelligence which characterize his plans and labors upon the farm. Standard agricultural works occupy a prominent place in his library, and the popular journals of the day, which treat of his profession, find a ready welcome and an eager perusal, by his fireside. Who, then, will marvel when they witness the success of such men—men who have labored "to improve both the soil and the mind?" But we are oftentimes told that much which is written upon agricultural topics is mere speculation, and never can be applied to practice with favorable results. This we admit in a measure, but let us inquire, Is it necessary to reject all agricultural reading, merely because an occasional article is submitted to our perusal, incompatible with the principles of that science which it is intended to enlighten us upon? No intelligent farmer will give an affirmative response to a question of this nature. Proper discrimination must be exercised concerning matters of this kind, or we can never hope to profit thereby. If we read an article which at once appears to contain a multiplicity of absurdities, we do not usually allow the article to be laid aside, with merely remarking that it is incorrect, but we strive to collect evidence which will place its incorrectness in a clearer light; and in this elucidation of its falsities, our attention is often directed to subjects which might never have been considered, if there had been no occasion like this to call them forth.

I long to see the art of cultivating the earth raised to a higher state of perfection. This can be accomplished only through the instrumentality of a more varied, practical and thorough knowl-

edge of those great principles upon which it is based. I say, then, let the agricultural press—the herald of true progress in this sphere, still go on fulfilling its mission. Let the farming community, by diligent study, acquire more liberal views of their calling, and of the means for its promotion, and thus more successfully pave the way for genuine, progressive farming.

J. H. G.

Hubbardston, April, 1862.

EXTRACTS AND REPLIES.

BLACK WARTS ON TREES.

Will you or some of your writers inform me through your paper how to prevent what I call canker worms from getting in plum and cherry trees? They cause a hard, black bunch to grow on the branches, and spoil the tree.

Norway, Me., July, 1862.

SUBSCRIBER.

REMARKS.—Cut them out carefully and thoroughly as often as they appear. The following is from the *Country Gentleman*:—

In conversing with a friend a few days since, he informed me that he had been successful in removing the black excrescences that have proved so injurious to plum trees, as follows: Saturate the knot with spirits of turpentine, and in time it will dry up and heal over. He thinks the disease is caused by an insect, which the spirits of turpentine destroys, and thereby remedies the evil. He had recommended it to his neighbors, and in all cases it has proved alike beneficial. In looking over some of the back volumes of the *Cultivator*, I find the general remedy recommended is excision, and knowing that this sometimes proves injurious to the tree, I thought I would send you this remedy—so simple and yet so beneficial—for publication, not doubting but that I should get some ideas in return from your correspondents.

I see the cherry is affected, in some sections of the country, with the black knot, and I presume the above remedy will prove alike beneficial to them.

COLD AND WET.

Such is the present month of July. Already have there fallen *five inches* of rain, and in very few of the days has the mercury, on a fair exposure, risen above 70°. These facts are extraordinary, and must essentially modify the products of the fields and gardens.

My thermometer distinctly indicates summer heat as 76°. When the mercury for weeks in succession, fails to reach this point, we may begin to query whether all is going rightly on.—My corn looks green and luxuriant, and rises a foot or more above my head, as I walk among it; but still, it needs heat to fill out and mature the ears. Grain of all kinds appears to be doing well. Such matures with less heat than corn. Potatoes were never better than the present season. I hear nothing of the rot. "Seed time and harvest" have come for the last seventy years, and I have no reason to fear that they will fail us. I have much more fear of the ugly secession spirit abroad. God grant that this may be suppressed, and this speedily.

P.

Essex Co., Mass., July 26, 1862.

CROP OF GRASS.

I learned to-day, that this will come short by at least *one-quarter part* of several years past, on the splendid farm of Gen. Sutton. As every one knows that he spares no expense or effort to make his lands as productive as possible, the deficiency must be charged to the malign influences of the season. This is contrary to the general impression of the season. Perhaps it may be chargeable to the *war*, as he is a Major General of long standing, and his attention must have been diverted from the farm, by the enlistment and organization of troops,—the all-absorbing topic of the day. The truth is, farmers must attend to their business, if they would have their barns full in due time; if they do not look to their farms, their farms will not sustain them, whatever may be their official station.

Essex Co., July 26, 1862.

"A PAIR OF TWINS."

We very frequently hear and use the expression, "A *pair* of twins," evidently meaning two born at the same time. But, strictly speaking, is this a correct expression? Is it true that two produced at the same birth constitute a *pair* of twins? Two, doubtlessly, constitute *twins*, but not a *pair* of twins. As it takes two to make twins, it must certainly take twice as many, or four, to make a pair of twins. If I am correct in this—and I believe that I am—it is very seldom that we see a *pair* of twins, although *twins* are often met with.

A CONSTANT READER.

Pawlet, Vt., July, 1862.

LEACHED ASHES.

Prof. Buckland, the able editor of the *Canadian Agriculturist*, says:

"Wood ashes always contain a considerable amount of carbonate of potash, lime, etc., and are consequently very beneficial to such plants as require large quantities of these alkalies, such as Indian corn, turnips, beets and potatoes. Leached ashes have lost much of the principal alkaline salts, and have been deprived of the greatest part of their most important soluble ingredients; still they must not be regarded as an unimportant fertilizer, and other matter which they contain is always more or less beneficial to the soil. Unless the land is well worked and contains sufficient organic matter, we should not consider ashes, whether leached or unleached, as alone adequate to the production of a good crop of wheat, turnips or corn."

There is something about old leached ashes that we do not understand, though we have given the subject considerable attention. We have seen instances where old leached ashes have had an excellent effect on wheat, while unleached ashes seemed to do no good. We have thought that perhaps the potash and soda which had been washed out, were replaced by ammonia and nitric acid from the atmosphere. The subject is one worthy of investigation. At all events, it is certain that leached ashes frequently have a very beneficial effect; and if the above hypothesis is true, the older they are the better.

For the New England Farmer.

MEANS OF AGRICULTURAL KNOWLEDGE.

MR. EDITOR:—What are our principal means of obtaining a knowledge of agriculture in New England at the present time? I make this inquiry, because I wish to know whether or not we are employing sufficient means for the education of the rising generation who are to occupy the land of their fathers, and to cultivate its rugged soil. New England is comparatively a hard, rocky and barren soil; but, under skilful cultivation, it is capable of producing all the necessaries and many of the luxuries of life in great abundance. Still, in order to compete successfully with other portions of the country where but little knowledge and effort are required in cultivating the earth, the New England farmer must possess superior knowledge of the business so as to be able to husband all his resources to the best advantage. It will not do for him to skim over the surface, to scratch the soil and cast in his seed, and expect an abundant harvest. No; what he most needs, is practical knowledge or science; for it is this alone which can enable him to render the rough and rugged soil of New England productive.

Let us briefly enumerate some of our principal means of acquiring agricultural knowledge, and endeavor to ascertain our real condition and prospects.

The first means of acquiring this knowledge is in the family, on the farm. This is very different on different farms, and in different towns and neighborhoods. On some farms, it is good, very good; on others, it is tolerably or indifferently good; on others, again, it is useless, or worse than nothing. It is no where uniform, methodical, systematic, or scientific. On one farm, the operations are all performed in a very careless, slovenly and unskilful manner; on another, they are all performed very differently, and are followed with very different results. Still, whatever may be the errors and defects of family instruction on the farm, it ought not to be underrated or held in disesteem, because in most families, and on most farms, it is doing an immense amount of good, and imparting a great amount of knowledge to the young.

The second means of knowledge consists of newspapers, periodicals and books, professedly treating of the science and practice of agriculture in all its departments. And it is greatly to be regretted, that these admirable means of knowledge intended for the benefit of all, should be improved by so few; that any unreasonable prejudice should prevent any one from receiving that instruction from books and newspapers which he would gladly and thankfully receive from the lips of a friend.

The third means of knowledge consists of the example, conversation and advice of neighboring farmers. A good example, accompanied by gentle words and useful advice, will have a great effect on youthful practice. The influence of such farmers is very great. The young are naturally inclined to imitate their superiors and elders in every kind of business. This is peculiarly the case in farm operations, in which every improvement is readily adopted and reduced to practice.

The fourth means of knowledge consists of farmers' clubs and town agricultural societies. In

every town where there is a farmers' club established for the discussion of agricultural subjects, there is generally an excellent school for young farmers. These farmers' clubs are generally made up of the best and most skilful farmers in the town; of men who read and think and reason, and, in all their discussions, aim to let their light shine for the benefit of each other. Mutual instruction is what they aim at, and not to astonish the world by an exhibition of some great monotony of nature or art. They have no premiums or State funds to bestow on unworthy objects. They see clearly, that the State's money which is now annually distributed among the several county societies so liberally, ought to be so managed as to impart knowledge to the great mass of young farmers, instead of being squandered away in county towns upon trifling and doubtful objects.

Such are some of our principal means of acquiring agricultural knowledge. Are they adequate to the purpose of imparting a thorough knowledge of agriculture to the rising generation? If they are, we ought to be satisfied with them, and endeavor to use them to the best advantage. But if these means are not sufficient, we should make use of additional means, so as to secure a greater amount of knowledge. It is obvious to every one, that the strongest man is not necessarily the best farmer. There is something which is better than physical strength, and which can accomplish more. It is knowledge which is able to overcome brute force, and subdue the ferocity of the tiger. The knowing farmer can always excel the ignorant farmer whatever be his physical strength, because his superior knowledge gives him additional skill in his business. In New England, the head as well as the hands must work. There cannot be much success in farming, where there is a lack of knowledge; for it is knowledge which enables the farmer to raise the largest crops, at the smallest cost, and with the least effort. How to do this successfully, the science of agriculture alone can teach. At the present day, the farmer is placed in such close proximity with almost every department of science, that it is difficult to determine what should be the extent of his knowledge.

Warwick, Mass., 1862. JOHN GOLDSBURY.

HABITS OF GRASSHOPPERS.

A Goliad correspondent of the Colorado (Texas) *Citizen* gives some curious facts in relation to the grasshoppers which have recently swarmed in that region. He says:

They have an especial fondness for wheat and cotton, but don't take so kindly to corn. The only vegetable they spare, is the pumpkin. The most deadly poisons have had no effect upon them; fumes of sulphur they rather like than otherwise; musquito nets they devour greedily; clothes hung out to dry they esteem a rarity; blankets and gunnysacks they don't appear to fancy. They swim the broadest creeks in safety, sun themselves a while, and then go on. The whole mass appear to start at the same time, travelling for an hour or two, devouring everything in their way, and then suddenly cease, and not move perhaps for a week, during which time no feeding is noticed; and finally, they carefully avoid the sea-coast.

GREEN HOUSE ENGINE.

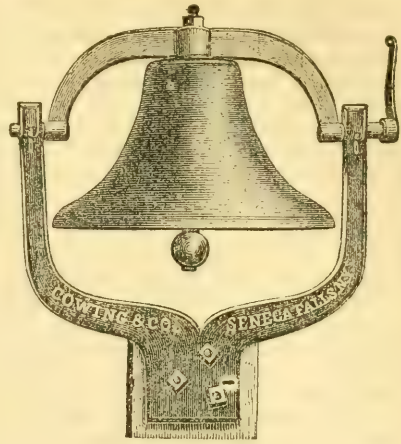
The Messrs. Cowing & Co., of Seneca Falls, N. Y., have been known for years as the manufacturers of iron pumps of various patterns, chain pumps, garden engines, &c. This year they have introduced a new green house engine—a representation of which accompanies this article. It consists of a small force pump firmly fastened into an iron pail. It can be carried quite easily when full, to any desired spot, and can be worked with one hand. We have one in our possession which we have tried, and find it will throw a small stream



a distance of 40 feet, and at the rate of two or three gallons a minute. Simply for watering plants, the necessity of renewing the supply of water so often would make it of little more value than the common watering pot, but in washing windows or carriages, in throwing water to the centre of flower-beds which cannot be easily reached in liquid manuring, or in throwing such compositions as soap suds, tobacco water, &c., upon the foliage of trees and plants for the destruction of insects, it appears to us to be a valuable article. The price is \$8.00, and it would be hard for any one *not* to realize the interest of this outlay from its use

STEEL AMALGAM BELLS.

Messrs. Cowing & Co. have also sent us one of their new bells, made of the above material. They are of several sizes, and designed for farms, engine-houses, school-houses, churches, &c. The ma-



terial of which these bells are constructed gives them strength and sonorousness, and at the same time enables the manufacturers to sell them at a price much less than other bells of the same weight. We can remember the sound of the *dinner horn* which we used often to hear in our younger days, and can remember, also, that it took a powerful pair of lungs to make it heard at any considerable distance. In those days, we should have been glad to have had the bell speak for us; and we doubt not there are many farms now, beyond the reach of the steam whistle, where one of these bells would be a welcome signal of the dinner hour, and where its stirring tones at sunrise, its warning voice in case of fire or accident, and its merry peal on festive occasions, would more than pay its cost.

GRAPE CULTURE.

The following is a postscript to a letter, received a few days ago from our much esteemed old friend, whose name is signed to it. His success in grafting the grape is very satisfactory:—

Shall I inform you of my success in grafting the grape-vine this spring? This morning I set grafts of the last two varieties on hand. I grafted the first about the middle of March on to the beginning of April, then stopped until about the middle of June; then, as time would permit, stuck in a few occasionally until this day, 2d July—all in the roots, or in branches laid under ground. Many of the grafts have already made a growth of four inches to four feet, *one* is bearing a cluster of fruit and some of those grafted ten days to two weeks, are pushing already. Of about one hundred grafts set, at least eighty will grow; and of these one hundred grafts, representing thirty varieties, I will have *every variety* to grow!

Last year's grafting are now strong plants, bearing from one to a dozen branches of fruit. By this mode of propagation a new variety may be fruited the second year for certain; while in planting the delicate, forced pot plants we must wait four to six years before fruit can be looked for. "Time is money" in more ways than one.—*J. B. Garber, in Germantown Telegraph.*

GRAVEL IN OXEN---A REMEDY.

During the latter part of March I had a noble ox taken suddenly sick, giving signs of great pain and an evident desire to discharge urine. Frequent pulsations of the urethra (always observable when cattle are voiding their urine) were noticed, which continued for several hours, the ox frequently lying down or standing in a stretching posture. After twelve hours, the pain with which he was at first taken appeared to somewhat abate, but there was no discharge of urine. Various remedies were administered, such as spirits of nitre in large quantities, and liquor of pumpkin seeds, but of no avail. He remained standing until he drew his last breath, when he fell to the ground. Not a muscle was noticed to move after his fall.

Upon a post mortem examination, the cause of his death was very apparent. It was, as I had supposed, an obstruction of the urethra. A stone had formed in the bladder, and then passed down the natural channel of discharge, until it reached the cod; here it became lodged, shutting up all passage for the escape of urine. The stone, which was of an oval, oblong shape, was not larger than an ordinary cranberry bean. It is composed of lime, similar in appearance to the crust collected on the inside of tea-kettles, but was covered with a membranous substance, doubtless formed after it became lodged, in consequence of inflammation taking place.

Since losing my ox, I have learned of several that have died of the same disease. Also, of two cases where cures have been effected in the following way: When you are sure there is an obstruction, the animal should be thoroughly examined by feeling the whole length of the urethra, if possible, to ascertain where the obstruction is. But if you fail to find where the obstruction is located, make an incision into the urethra where the pulsation I have observed is observed. If then the animal does not discharge his urine, you may be sure the obstruction is higher up, and so large that it cannot pass down the natural channel. This may be removed by inserting a catheter and crowding it back. If the difficulty is below the incision, the animal may ever after continue to discharge the urine from the orifice made, without any detriment to the health of the animal. There is a case of this kind near here, which has been in this situation for three years.—J. I. KNAPP in *Rural New-Yorker*.

"NOTHING TO DO."—We have for several years known an elderly farmer, whose fields are level and well adapted to the use of the mowing machine, but who could not surmount the idea that machinery is a plague on the farm. So at early dawn he has bent over the scythe on his broad acres, until he has acquired a bend in his back that no medicament can cure. This year, the pressure was too strong for him. He heard the "clack" of machinery all about him, and saw his neighbors clearing their fields at the rate of two acres to his one. He could stand it no longer. A Wood machine was purchased, and proved a good one, and now he may be seen early in the morning under his beautiful trees, feeding the poultry, or slowly following his fine cows as they

nibble the sweet grass on the roadside, on their way to pasture. He is in no hurry, not he. He sits twice as long at the breakfast table as he did last year, and thinks the food tastes better than it did then. He rises early, to be sure, and his practiced eye scans everything, and sees that all is right. The horses are hitched to the machine about nine, and, presto, before twelve there is as much grass down as all hands can take care of. He thinks he can earn more in the time which he has to bestow upon his stock and his care of "little things," than he ever did in the mowing field. Indeed, it seems, he says, as if he had "NOTHING TO DO!"

BENEFITS OF AUTUMN PLOWING.

The tillage and drainage of the soil are very closely related to each other. So indeed are the tillage and manuring the soil. And these, not merely as cause and effect are related—though drainage does enable tillage, and tillage does alter composition—but as being operations of the same class and kind. And thus Mr. Bailey Denton, though engaged in a lecture upon land drainage, could not help referring to the steam plow—as the great tillage implement of the future. And we had from him, too, the striking fact bearing on the composition of a fertile soil, that in a state of perfect tilth one-quarter of its bulk is air.

Mr. Smith, of Lois-Weedon, says that in all clay soils containing the mineral elements of grain, perfect tilth dispenses with the need of manure; and there cannot be a doubt that a deep and thorough tillage enables soil to draw immensely on the stores of vegetable food contained in air and rain. Messrs. Hardy again say that perfect tilth dispenses with the need of drainage, and there can be but little doubt that deep and thorough tillage facilitates the operation of whatever drainage may exist, whether it be natural or artificial.

In both these cases the useful lesson is well taught, that it is true economy rather to put the cheap and copious storehouse of Nature's agencies to its fullest use, than by laborious and costly artificial means to imitate expensively their operation.

Such a lesson applies, beyond the *advantages* of tillage to the methods by which tillage is obtained. Among the earliest suggestions of cultivation by steam power was that of reducing by its means the soil to tilth at once. The land was to be torn down as the deal is torn down at the saw-mill; though before the machine it may have been as hard and firm as wood, behind the tool as it advanced at work it was to lie as light and fine as sawdust. But it has at length been found that it is better because cheaper, and more perfect, too, to leave this last refinement of the tillage process to the weather, which does it without cost. The land is now torn—smashed up—or moved and thrown about by plow or grubber in great clods and lumps. This is best done in dry autumn weather, and thus it lies till spring. Certainly no climate is better adapted for cheap tillage than the English—the rains and frosts of winter following a dry September and October must penetrate and thrust asunder the clung and hardened masses of the soil. No two particles shall remain adher-

ing to each other, if you only give room and opportunity to the cheapest and most perfect natural disintegrator in the world. No rasp, or saw, or mill will reduce the indurated land to soft and wholesome tilth so perfectly as a winter's frost. And all that you need to attain its perfect operation is, first to provide an outlet for the water when it comes—by an efficient drainage of the subsoil, and then to move the land while dry and break it up into clods and fragments, no matter how large they be, and leave them for alternate rain, and drought, and frost, and thaw, to do their utmost.—*London Agricultural Gazette.*

WHEN TO CUT BUSHES.

We have no doubt but that late in summer, when the growth of the season is just ended, and the plant has expended all its energies in growing, and is just falling into that rest so essential to vegetable maturity, is an excellent time to behead these plagues of the farm. But we have tried another season, when the labors of the year were not quite so pressing as is usual in summer, or early autumn, and have found it so successful in our case, that we hold it worthy of commendation to others.

Many years ago, there was a dense patch of willows on a swampy spot at one end of the meadow. They covered about half an acre, and were so thick that any animal, biped or quadruped, would find it difficult to pass through the thicket. It was waste land, good for nothing unless it were for wasps and hornets to occupy in rearing their young, or for the bob-o-link to pour out his noisy clatter. More than this, it was a grievous eyesore, that closely embodied phalanx of willows in full view of the highway, and the first object that greeted the eye in one direction from the windows.

It was in our school-boy days, and it so happened, as was then customary in New England, our school adjourned over from Wednesday night before Thanksgiving, until the following Monday, to give the teacher time to go home and visit all his cousins and neighbors, the big boys to skate and attend turkey shoots, and every one to enjoy themselves in the ways best suited to their fancy.

Cold weather had set in, in earnest. The ponds were all frozen over, and the streams flowed noiselessly along under their icy blankets—dark clouds chased each other across the horizon, occasionally spitting snow as from very spite, and the hoarse north wind piped in doleful notes the birth of the season of storms and snow-drifts, of sleigh-rides and singing-schools. Of course, our old enemies, the willows, were firmly lodged in winter quarters. At least Jack Frost had one of them firmly secured in his unflinching, relentless vice. Taking that fact into consideration, in connection with the other more important one that we had two whole days all our own, to do what we pleased, with the proviso that we must not be pleased in doing any sort of mischief, we resolved to open speedy hostilities on our old, hateful enemies, the willows, and accordingly with a sharp axe in hand, we commenced our warfare, cutting them off smoothly and rapidly just below the surface. Our progress in the business was very good in these two cold days. The improved look of the meadow was an ample compensation. We have no doubt

we made better progress in our studies that winter for the triumphs of this two days' labor. But this was but the beginning of the end in this business. The removal of the willows revealed old logs and stumps; and there must be drains cut to take off the water that had fed the willows. So it was concluded to fence off that end of the meadow for pasturing, while this operation was going on.

The result was this: The bushes were cut so low, that the first thaw covered their stumps with water, which froze firmly over them. Whether they drank too much in this drowning process, we shall not presume to say. This we know, however, that the subsequent growth was a very feeble one, and the browsing of the animals pastured there, completed the work of destruction so effectually, that on restoring the old swamp to the meadow, it was destitute of willows as the desert of Sahara.

We have another piece of swamp, on which much earth had been carried by artificial means, and which in 1859 had become a tangled mass of willows and alders. In January of 1860, we cleared off a portion of this swamp by cutting the crop in the same way as before, just below the surface, when the ground was frozen. Two seasons of growth have passed since then, and the new sprouts make but a very feeble show. Another cutting, which can be effected in a very short time, would probably eradicate the bushes entirely.

Now we do not claim that we have taken the best time to cut our bushes. We state when we did, how we did it, and the result, leaving it for the intelligent agricultural world to draw their own inferences. We think, however, that in winter, if frost favors the object, and there is no snow to obstruct, it is the best time for us, for then it will not interfere with the ordinary duties of farming, and labor is cheaper. Then the bushes being firmly frozen in, every blow of the axe will tell, and there is no mud to annoy the operator. We have some belief that the freezing and thawing over the stumps, and the water that settles over them in spring, has something to do with drowning out these mischievous aquatic shrubs.—*WILLIAM BACON in Country Gentleman and Cultivator.*

BUCKWHEAT A BAD CROP FOR THE SOIL.

J. W. Colburn, writing to the *Country Gentleman*, says:—"In the last number of your paper, Mr. Holden, of North Clarendon, Vt., inquires for the reason of a poor crop of corn the next year after a crop of buckwheat on the same land.

I can give him what little experience I have had in this way. Several years ago I turned in a light crop of grass the last of June, and sowed the sward to buckwheat, and had a heavy crop. The next year manured the same field well, and planted to corn. It came up feebly, looked pale and sickly for all the first part of the summer, but seemed to recover in a measure towards the latter part, but did not mature before the first hard frost so as to make a fair crop of sound corn—a fair growth of fodder with an undue proportion of soft corn. Not thinking that the previous crop had much to do with the failure of the one following, and liking a crop of forty bushels per acre of buckwheat, which is good swine feed, I repeated the same process within a year or two after, and

with the same results. I then made up my mind that buckwheat is not only an exhausting crop, but that it leaves the soil unfit for a good crop after it, until it can recover from the deleterious effects of the buckwheat. It seemed to create an acidity in the soil, for I noticed before plowing the next spring, that sorrel started up plentifully. I abandoned the growth of buckwheat from that time, and have never found any other crop that left the soil unfit for a good crop of corn, with proper preparation and culture.

In my case I lost more on the corn crops than the whole value of the buckwheat. A crop that will create a cold acidity in the soil, so as to sensibly affect the one following, is unfit to be grown upon a good soil. Buckwheat will thrive fairly on rather poor, sandy and gravelly soils, if the season is not too dry. If I had such land, and was desirous of cultivating this crop, I would put it upon this kind of soil once in two years, letting it rest the alternate year, but never upon good soil designed for corn the following year. No crop that can exhaust more than the value of a crop can be a paying one in the long run on good productive lands."

For the New England Farmer.

CANKER WORMS---ORCHARDS.

MR. EDITOR:—Your correspondent, "W. N. Shaw, Esq.," has told us a terrible tale of the canker worm upon his premises. If anything would make a farmer shrug his shoulders and forget to skip a few hard words, it would be his promising orchard, well invested with the canker worm.

This would seem to be the proper time for scientific study, and to apply the remedy. Now, we know exactly where the enemy lies, that by its silken cord, it lets itself down to the ground within the limits of the branches of the tree from which it had foraged. How can we destroy this grub now so near the surface, among the grass roots, waiting to be transformed to do its wicked work the next spring? Placing heavy paper around the tree and taring, stops a great many grubs, but it must be watched, and the tar often applied. Some apply directly upon the bark, but this endangers the health of the tree, while others have tired themselves and ended their labors in disgust.

It has occurred to me to sow salt or alkalis freely under the trees, particularly in mowing orchards, then use the Michigan or double Eagle plow as soon as it is the proper time to sow grass seed, and at once stock it down to grass again, which will largely increase the crop for the next year, even without manure. By this process, the grub will be well salted and the sward furrow will be deeply and perfectly buried. No other plow could do it so well, in my judgment. It is about time to sow grass seed.

It is said this grub begins to move for the tree a long time before the frost is out of the ground. If so, it is high the surface; a deep burial and a reverse position might effectually destroy it.

These suggestions may be nothing new, and perhaps have been put in practice by many, but I cannot conceive of a more effectual process. Too many orchards become prematurely old by neglecting to cultivate among the trees, and manuring well, as you would for a field of corn or a crop of oats. Beside, when the old sward is turned un-

der, how many thousand of the pestiferous insect creatures, such as apple curculio, etc., may be destroyed? Not like the tree in the forest, that is enriched by the dropping of its own leaves, and grows luxuriantly, the old orchard apple trees, for a half century, have stood like the monuments of a grave-yard, only to gather moss and bear no fruit; vigor, life and fruitage come from the plow, the manure heap and the labor of man.

Brooklyn, L. I.

H. POOR.

A NORWEGIAN HOME.

The houses in which these country people reside are not altogether unlike the small log-cabins of the early settlers on our western frontier. I have seen many such on the borders of Missouri and Kansas. Built in the most primitive style of pine logs, they stand upon stumps or columns of stone, elevated some two or three feet from the ground, in order to allow a draft of air underneath, which in this humid climate is considered necessary for health. They seldom consist of more than two or three rooms, but make up in number what they lack in size. Thus a single farming establishment often comprises some ten or a dozen little cabins, beside the large barn, which is the nucleus around which they all centre; with smaller cribs for pigs, chickens, etc., and here and there a shed for the cows and sheep, all huddled together among the rocks or open hill-side, without the least apparent regard to direction or architectural effect. The roofs are covered with sod, upon which it is not uncommon to see patches of oats, weeds, moss, flowers, or whatever comes most convenient to form roots and give consistency and strength to this singular overtopping. The object, I suppose, is to prevent the transmission of heat during the severe season of winter.

Approaching some of these hamlets or farming establishments during the summer months, the traveller is frequently at a loss to distinguish their green-sodded roofs from the natural sod of the hill-sides, so that one is liable at any time to plunge into the midst of a settlement before he is aware of its existence. Something of a damp earthy look about them, the weedy or grass covered tops, the logs green and moss-grown, the dripping eaves, the veins of water oozing out of the rocks, give them a peculiarly northern and chilling effect, and fill the mind with visions of long and dreary winters, rheumatisms, colds, coughs and consumptions, to which it is said these people are subject. Nothing so wild and primitive is to be seen in any other part of the day, when the inhabitants are out in the hills attending their flocks or cultivating their small patches of ground. I passed many groups of cabins without seeing the first sign of life, save now and then a few chickens or pigs rooting about the barn-yard. The constant impression was that it was Sunday, or at least a holiday, and that the people were either at church or asleep. For one who seeks retirement from the busy haunts of life, where he can indulge in uninterrupted reflection, I know of no country that can equal Norway. There are places in the interior where I am sure he would be astonished at the sound of his own voice. The deserts of Africa can scarcely present a scene of such utter isolation.—*Harper's Magazine.*

WHAT ARE TREES MADE OF?

If we were to take up a handful of soil and examine it under the microscope, we should probably find it to contain a number of fragments of wood, small broken pieces of branches or leaves, or other parts of the tree. If we could examine it chemically, we should find yet more strikingly that it was nearly the same as wood in its composition. Perhaps, then, it may be said, the young plant obtains its wood from the earth in which it grows. The following experiment will show whether this conjecture is correct or not. Two hundred pounds of earth were dried in an oven, and afterwards put into a large earthen vessel: the earth was then moistened with rain-water, and a willow tree, weighing five pounds, was planted therein. During the space of five years the earth was carefully watered with rain-water. The willow grew and flourished, and to prevent the earth from being mixed with fresh earth, being blown upon it by winds, it was covered with a metal plate full of very minute holes, which would exclude everything but air from getting across the earth below it. After growing in the earth for five years, the tree was removed, and on being weighed was found to have gained one hundred and sixty-four pounds. And this estimate did not include the weight of the leaves or dead branches which in five years fell from the tree.

Now came the application of the test. Was all this obtained from the earth? It had not sensibly diminished; but in order to make the experiment conclusive, it was again dried in an oven and put in the balance. Astonishing was the result—the earth weighed only two ounces less than it did when the willow was first planted in it! yet the tree has gained *one hundred and sixty-four pounds*. Manifestly, then, the wood thus gained in the space of time was *not* obtained from the earth; we are therefore obliged to repeat our question, Where does the wood come from? We are left with only two alternatives, the water with which it was refreshed, or the air in which it lived. It can be clearly shown that it was not due to the water; we are consequently unable to resist the perplexing and wonderful conclusion—it was derived from the *air*.

Can it be? Were those great ocean spaces of wood, which are as old as man's introduction into Eden, and wave in their vast and solitary luxuriance over the fertile hills and plains of South America, were all these obtained from the thin air? Were the particles which unite to form our battle-ships, Old England's walls of wood, ever borne the world about, not only on wings of air, but air themselves? Was the firm table on which I rest, the solid floor on which I dwell, once in a form which I could not as much as lay my finger on, and grasp in my hand? Wonderful truth! all this is air.—*Eng. Paper.*

KEEPING GRAPES.—Dining with a friend recently, we had the unusual luxury of a desert of Catawba and Isabella grapes. Their mode of preservation being the theme, we learned that they were picked when perfectly dry and ripe, and packed carefully in bunches, in a box, between layers of cotton, and as much as possible excluded from the light and air. More recently a gentleman from Pennsylvania tells us that he has seen

them successfully preserved till spring, as follows: "Into the bottom of a small keg or nail-cask put a layer of grape leaves fresh from the vines. On these carefully place a layer of sound, ripe, dry grapes, then leaves and grapes in alternate layers, till the keg is full. Head up the cask, and bury it in some well drained ground, below the depth of the frost." Like other things excluded from the light and air, they will change rapidly on exposure, and hence when a keg is opened and they are found good, use them freely.

POULTRY-HOUSES AND YARDS.

ARTHUR YOUNG, whose opinions and inculcations on most matters appertaining to farming and domestic life are of a highly practical character, in some observations upon this subject says:—"When a set of houses are intended for the rearing and feeding of poultry, a situation should be selected near, or close to the farm-yard, and with ample space around for the fowls to disperse over in the day time, and containing one or more ponds for the aquatic birds. All must have access to a gravel-yard, and to grass for range, and to cleanliness, and to white-washing, not for appearance merely, but to destroy the vermin."

Poultry should never be restricted as to food, if we are to expect profit from them. It is more judicious, and will be more for our interest to allow a superfluity, than to stint them in this respect. Loudon observes, in one of his valuable works, that in selecting a site for a poultry-house, one should be chosen which is perfectly dry, and with an exposure to the east, or south-east, in order to secure to the fowls the benefit of the sun's rays during the inclement seasons of spring and autumn. But this, some will say, is a department of rural economy which belongs, or should belong exclusively to the female part of the household. Very well: We have no objection to such an assignment of it, but then the good man must see that the proper shelter is provided, and store of good food supplied for the fowls. The housewife can doubtless do much in this as in various other matters to ensure the success of her husband's labors. In the language of old Father TUSSEY, whose "*Five Hundred Points of Good Husbandry*" should be in the hands of most farmers, although published so long ago as the reign of Henry VIII., of England—

"When husband is absent, the housewife be chief,
And look to their labor that eateth her beef.
The housewife so named (of keeping the house,)
Must tend on her profit, as cat on a mouse."

It is very desirable in rearing poultry for the market—and especially hens—that good varieties be selected, such as will not only lay well, and be watchful and attentive mothers in bringing up their young, but be kindly disposed to fatten when preparing for the market. The Bolton Greys are said by those who have had much experience in

poultry-raising, to excel in the latter respect, while they are exceeded by the Shanghaes and Dorkings in the former. The White Dorkings are beautiful birds. They are of a middling size, entirely white, have partially feathered, yellow legs, and are good layers and mothers. They are a little inconstant in sitting, and inclined to sit too much. Their flesh is juicy, tender and delicious, and comes nearer the common fowls of New England many years ago, than any other we have ever tasted. The *Speckled Dorkings* are also superior fowls, having the broadest bodies according to the whole weight of any fowls we have ever seen. Dr. EBEN WIGHT, of Dedham, who has imported several varieties of fowls—and among them the *Speckled Dorking*—sent us a splendid pair of them last fall, which now promise to be an unequivocal addition to our poultry-yard. The doctor has conferred great pleasure, as well as profit, upon poultry-raisers by his attention and excellent judgment in the introduction of superior breeds of poultry.

The *Brahma Pootra* fowl is highly esteemed by many, and our own experience coincides with this good opinion. Mr. IVES, of Salem, who has had much experience in rearing poultry, gives this breed the highest praise, both for beauty of appearance and profitable products.

"The chicken," says a late writer, "is classed by the naturalist in the tribe of the *Gallinaceae*, forming part of the order *Rasores* or scraping birds." These fowls swallow their food without mastication, a process which is rendered utterly superfluous by the provision of an apparatus denominated a "*crop*," which bears a very near resemblance to the first stomach of the cow, and in which the food received is speedily macerated, and to a certain extent dissolved or digested by the action of secreted fluids. Below the crop there is a second cavity or sac-like organ, into which the food in its partially macerated state passes, and where it is again subjected to the action of the stomachic, or animal solvent or digestive fluid, and is finally transmitted to the "gizzard," or last stomach, which is furnished with muscular and cartilaginous linings of very considerable strength. Here it is insinuated and converted into a thin paste, preparatory to its reception into the chyle-gut, from which it passes finally into the circulation. The muscular force of the gizzard is so great that even glass is in a few hours reduced to powder when submitted to its action, and even the roughest and hardest bodies are not proof against its force. Spallanzani is said to have introduced into the gizzard of a fowl a leaden ball, with a dozen needles so fixed in it that their points protruded a quarter of an inch from the surface in various directions, yet this formidable machine, instead of proving of the slightest injury, was in itself broken

down, and the sharp needles demolished entirely, in the brief space of a little more than two hours!

Instinct leads the barn-door fowl to swallow gravel, shells and glass, to facilitate and hasten the comminution of the food it partakes of, whether animal or vegetable. While having the free range of the fields, a very considerable proportion of the food of most fowls is derived from the insect tribes. This fact suggests the importance of supplying them liberally with meat, when confined to the hen-house. A hen restricted exclusively to a vegetable diet, no matter how liberal may be the hand that feeds her, will be far less profitable than one fed on a mixed diet of meat and vegetables.

For the New England Farmer.

FENCES.

So much has been said of late in the *Farmer* about fences, that the subject may seem almost exhausted, yet as this is one of the most important items connected with the business of farming, it may not be unprofitable to your agricultural readers to have their attention called to it once more.

Farming, without fences, is of course an impossibility. Good farming, with poor fences, is equally so. With poor fences, a man may not expect to have peaceable cattle or good neighbors, nor can he feel any security for his crops, as they are hourly exposed to destruction. Under such circumstances, (which are by no means unfrequent,) is it strange that farming is regarded as the most vexatious and uninviting of all employments? If, then, good fences are one of the essentials of farming, of course the question at once arises—what kind of fence is the most profitable to build?

Mr. I. Palmer, of South Hampton, N. H., has mentioned in your paper several varieties which he regards as good, and which are, without doubt, a great improvement on many kinds now in use; but there is a kind of fence coming into use in this vicinity, which, in my opinion, is far superior to any which Mr. P. has mentioned. I refer to that known as Smith's patent, a description of which has recently been given in the *Farmer*. I lived for several years near Mr. Smith, and have seen his fence thoroughly tested in a variety of ways. It works equally well on swampy, clayey or ledgy land, and fully comes up to any recommendation which has been given of it.

Mr. Palmer inquires how the braces are to be tied to the boulders? This is easily done by means of looped wire, or pieces of iron set in brimstone, which, if properly done, are perfectly immovable. I built some of this fence around my barnyard last year, which, to keep off the storms, I made tight and high, and it stands now just as firm as though the posts were frozen into the ground. As for its durability, it is difficult to tell what part of it will fail first. If any of your readers have occasion to pass through Haverhill, N. H., tell them to call on Mr. Smith and examine for themselves, and if they have heretofore been skeptical on the subject, they will be likely to be so no longer, for "seeing will be believing."

Many of the best farmers in this vicinity, who are not usually hasty to adopt new notions, have become satisfied in regard to this fence, and are preparing to build it on their own farms. Undoubtedly, it will eventually come into general use, and if so, depend upon it, the country will become richer thereby. I. B. AYER.

Bradford, Vt., July, 1862.

REMARKS.—If any one wishes to see the fence our correspondent so greatly commends, he can find it on our farm at Concord, Mass., where some fifty rods are set. The fence rests entirely upon stones, not a particle of it touching the ground. We expect to be able to give the exact cost per rod, as it stands.

THE FLIGHT OF BIRDS.

The nephew of Dr. Jenner, when on board a vessel going in a direct course for Newfoundland, and more than one hundred leagues from any land, saw a brown owl gliding over the ocean with as much apparent ease as when seeking for a mouse over its own native fields. Mr. William Thompson, of Belfast, in his *Natural History of Ireland*, records, vol. I., page 102, from the log book kept on board the *John and Robert*, of five hundred tons, Captain M'Keehnie, from Quebec to the port of Belfast, that from thirty to forty snowy owls, on the 16th of November, 1838, were seen when the vessel was 250 miles from the Straits of Belleisle. Several followed the ship; from fifty to sixty were seen on the 18th, some alighting on the rigging and yards; three were caught and taken to Belfast alive. The last of those seen at sea was on the 20th of November; the vessel then near 700 miles from Belleisle, and sailing along in latitude 54, or nearly so. The Rev. Robert Holdsworth wrote me word that a water-rail alighted on the arm of a man-of-war, about 500 miles to the westward of Cape Clear, and at the same distance from any known land. An officer of the ship caught it, and carried it with him to Lisbon, feeding it with bits of raw meat. In a day or two it became perfectly tame, and would eat out of his hand. By the kindness of two officers of the Royal 42d Highlanders, stationed at Bermuda, I received the skin of a land-rail shot there. This bird is not found in the New World, and could only have reached Bermuda under the influence of a strong northeast wind and thus saved its life, for a time, by making that island. With respect to Sir Ross's pigeons, as far as I can recollect, he dispatched a young pair on the 6th or 7th of October, 1850, from Assistant Bay, a little to the west of Wellington Sound, and on the 13th of October, a pigeon made its appearance at the dovecot in Ayrshire, from whence Sir John had the two pairs of pigeons which he took out. The distance between the two places is about 2000 miles. The dovecot was under repair at this time, and the pigeons belonging to it had been removed; but the servants of the house were struck with the appearance and motions of this stranger. After a short stay, it went to a pigeon-house of a neighboring proprietor, where it was caught and sent back to the lady who originally owned it. She at once recognized it as one of those she had given to Sir John Ross, but to put the

matter to a test, it was carried into the pigeon-house, when, out of many niches, it went directly to the one in which it had been hatched. No doubt remained in the mind of the lady as to the identity of the bird.—*Yarrell's Birds*.

SCIENTIFIC MODE OF BOILING MEAT.

When animals are newly killed, there is an acid secretion in their flesh which turns blue litmus paper red, and which renders their flesh easy of digestion, if it be eaten immediately. In a few hours, however, this acid evaporates, and the meat becomes hard and difficult of digestion, till it has been softened by cookery, or kept sufficiently long to have become tender, from the process of decomposition having commenced. In Liebig's recently published work on the "Chemistry of Human Food," we are told that boiling flesh slowly, effects a chemical change in its composition; and, according to the length of time employed in boiling, and the amount of water used, there takes place a more or less perfect separation of the soluble from the insoluble constituents of flesh: the water, or soup, in which the flesh has been boiled, containing the soluble matter, and the *bouilli* or meat from which the soup was made, consisting chiefly of fibrous, insoluble matter, nearly useless as nourishing food. Thus it is obvious that when the water in which the meat has been boiled slowly is thrown away, by far the greater part of the soluble or nutritious matter is wasted. A very different mode of cooking should be adopted when it is wished to eat the meat. The muscular fibre of flesh in its natural state is everywhere surrounded by a liquid containing dissolved albumen. When this is removed by boiling with water, the muscular fibre becomes hard and horny, and this hardness increases the longer it is boiled. "It is obvious, therefore," observes Liebig, "that the tenderness of boiled meat depends upon the quantity of albumen deposited between the fibres, and there coagulating; for the contraction or hardening of the fibres is thereby, to a certain extent, prevented. If the flesh intended to be eaten, be introduced into the boiler when the water is in a state of brisk ebullition, and if the boiling be kept up for some minutes, and then so much cold water added as to reduce the temperature of the water to 158°, the whole being kept at this temperature for some hours, all the conditions are united which give to the flesh the qualities best adapted to its use as food. When it is introduced into the boiling water, the albumen immediately coagulates from the surface inwards, and in this state forms a crust or shell, which no longer permits the external water to penetrate into the interior of the mass of flesh. But the temperature is gradually transmitted to the interior, and there effects the conversion of the raw flesh into the state of boiled meat. The flesh retains its juiciness, and is quite as agreeable to the taste as it can be made by roasting; for the chief part of the sapid constituents of the mass is retained, under these circumstances, in the flesh."

A GOOD IDEA.—That is a good idea of Clark's: "The frost is God's plow, which he drives through every inch of ground in the world, opening each clod and pulverizing the whole."

LATE PASTURING.

Some farmers keep their cattle out as late as possible in the fall, and even into winter. The pastures are gnawed very close, and even the after-math of mowing fields, as if they never expected to get another crop of grass from them. This is very bad husbandry upon any land, and especially upon that recently seeded with herds-grass. This grass, as is well known to all careful observers, has a bulbous root, and the fine roots that shoot out from the bottom are not as strong as the roots of most other grasses. It is, therefore exceedingly liable to be torn out by the roots by grazing cattle, especially if the grass is short. In a close cropped meadow where this grass has been sown, nothing is more common than to see thousands of these dried bulbs lying upon the surface. We doubt the economy of grazing a herds-grass meadow at any time. But if done at all, it should not be cropped after the first of November in this latitude.

The roots of all the grasses are designed to be covered with their own leaves and stalks during the winter. These, and the snow, protect them from the alternate freezings and thawings, and bring them out in good condition in the spring. The farmer who undertakes to thwart the designs of Nature in this respect, will find it a very expensive business. The little that he saves in feed now, he loses next season in the diminished yield of the pasture or the meadow. We ought always to manage so as to have Nature working with us, instead of against us. This is one of the evils of overstocking farms. The farmer is afraid that he has not quite fodder enough for winter, so he pastures till the ground is frozen. He cuts less hay for the next season, and he is still more sorely tempted to pasture.

It is quite as bad for the cattle as it is for the land. If they have no fodder in the month of November, they lose, rather than gain upon pasture, unless it is much better than the average. Every animal ought to go into the stable in a thriving condition—if not fat, at least in full flesh. They are then easily kept thriving upon good hay, or upon hay and roots, straw and meal. After several years' close observation directed to this particular point, we do not think any thing is gained by pasturing in this latitude, and north of it, after the first of this month. All the grasses must have time to cover their roots in order to make flush feed next season. Cattle foddered through a part of October, and brought to the stable about the first of November, in good flesh, are easily wintered. It is better management to buy hay or to sell stock, than to pinch the pastures by close feeding.—*American Agriculturist*.

SIMPLE RECEIPTS FOR MAKING VINEGAR.—T. B. Miller, of Clayton, Ind., has communicated to the New York Farmers' Club the following simple receipts for making vinegar :

"Fill nearly full any vessel, jug, crock, pan, tub or barrel with pure rain or soft water, sweeten it with any kind of molasses, (the quantity is not material,) set it in a moderately warm place, or in the sun, cover with sieve, gauze or net, to keep out flies and gnats. In due process of time it will be vinegar, when it must be put into a suitable ves-

sel and stopped close. To convert cider into vinegar—if made from sweet apples, it is only necessary to set the barrel in a warm place and knock out the bung ; if from sour, stir in a little molasses, and when sour enough bung up tight. Vinegar barrels should be well painted, as they are liable to be eaten by worms.

It will be proper to state that it is the action of the atmosphere, which in time converts the sweetened water into vinegar, hence the greater the surface of water exposed to its influence the sooner it will sour. There is a thick scum rises on the top of the vinegar when making, which is the 'mother,' and should not be thrown away."

A WOODLAND SONG.

From north and south, and east and west,
A sound of joy is coming ;
The partridge, in his russet vest,
Down in the glen is drumming ;
The squirrel and the cedar bird,
And the woodpecker, all are merry,
And I, too, sing, as I flit my wing,
Chick-a-dee-dee-down-derry !

Because, no more, for walls of wood,
The nations now will ravage,
With ringing axe, the solitude,
So dear to bird and savage ;
Since iron, only, on the sea,
Henceforth, the day will carry ;
Then sing, old passenger, with me,
Chick-a-dee-dee-down-derry !

Live on, live oak, on ridge and glade,
Unfearful of disaster ;
Pine tree, that erst a mast had made,
Of you I now am master ;
Bend, beech, unto the linden tree,
Young ash, embrace the cherry,
And sing, old beeswax, sing with me,
Chick-a-dee-dee-down-derry !

Vanity Fair.

LIME IN AGRICULTURE.

In a paper lately read by Boussingault, before the Paris Academy of Sciences, he stated that lime introduced in an arable soil, very quickly sets at liberty a certain quantity of azote in the state of ammonia : the azote elements were before united in insoluble combinations, not assimilable by plants—the action of the lime sets them free, and permits a part of the capital buried in the soil to be utilized for the next crop. Boussingault thinks that certain mineral matters, such as potash and silica, may be liberated in the soil by the lime ; that other substances injurious to plants are destroyed or modified by the same agent, and that to these effects is added besides, a physical action, changing the constitution of the land. The action of the lime is thus excessively complex, and its good effects can only be explained by studying attentively the special circumstances under which they are produced. The grand fact proved by the present researches of Boussingault is, that there exists in mold, as well in the form of organic matters as in that of mineral matters, a host of substances completely inert for vegetation, until the moment when some proper agent renders them assimilable by plants. The continuance of experiments can alone clear up these complex facts, and point out to our agriculturists the most effective processes.

For the New England Farmer.

THE BIRDS OF NEW ENGLAND---No. 20.

KINGLETS---TITMICE.

Ruby-crested Kinglet—Golden-crested Kinglet—Crested Titmouse—Black-capped Titmouse—Hudson's Bay Titmouse.

In the genus *Regulus* we find a few species of very minute and interesting birds, two of which visit New England, and are widely distributed over North America. They are hardy, extremely active birds, and perform extensive migrations, though one species is sometimes found here in the depth of winter. Their color is generally some plain tint of olive, with an erectable crest of brightly-colored feathers.

The RUBY-CRESTED KINGLET, (*Regulus calendula*, Licht.) winters in Mexico, and some of the Southern States, and reaches Massachusetts in April, first appearing among the maple blossoms, nimbly searching among the opening buds for a small black beetle on which it feeds much, and other insects and larvæ. For about two weeks it is not uncommon in our woods and swamps, busily hunting its food among the evergreens, and the yet almost naked twigs of the deciduous trees, searching the tops of the tallest trees, where they seem but little larger than Humming Birds, as well as the low bushes. At this time the males possess a low but very agreeable warbling song, frequently uttered during the clear, fine mornings of the last of April and the first week of May; and at this early season, their song can only be listened to with great pleasure, seeming the more sweet, heard amid the desolate and leafless woods. When several males meet, they erect their brilliant crests, which are then conspicuous, and go through a variety of odd and curious gesticulations, their little throats swelling and quivering as each tries to excel the others in song. As soon as the season has a little advanced, they leave for more boreal regions, where they spend the summer rearing their young, and are not again seen till October, when they return to the South. A few sometimes pass the summer among the mountains of the Middle States, but their breeding habits seem to be yet unknown. In the fall they are more numerous, and occasionally visit the orchards; a few often linger till late in November. This bird is perhaps better known as the *Ruby-crowned Wren*.

Length four and a half inches; breadth of wings six and a half. Above, dark green olive, with a tinge of yellow; beneath, yellowish white; an oblong patch of erectable, scarlet feathers on the crown, which usually lie concealed by other feathers.

The GOLDEN-CRESTED KINGLET, (*Regulus satrapa*, Licht.) is found throughout the northern parts of the United States, westward to the Rocky Mountains, but is more circumscribed in its habitat than the preceding, which appears to visit nearly all parts of the continent. In its habits, as well as in its general colors, it greatly resembles the preceding species, spending the summer to the northward, and appearing here in spring and autumn, and is equally active and expert in finding and capturing its prey. In fall they are sometimes quite numerous, frequenting the orchards and feasting upon the insects that then infest the leaves of the apple trees, as well as hunting in the woodlands. They occasionally associate with the

Ruby-crested species, but are more frequently found in company with the Chickadees, Nuthatches and Brown Creepers, often forming a noisy party of several dozens. They usually forage at this season in small parties of four or five to a dozen or more, are very unsuspicious and industrious, searching the extremities of the twigs, the branches and the bark of the trunks with great care for the lurking larvæ. Their only note at this season seems to be a feeble, plaintive *schreep*, which is their call-note. Although but half the size of the Chickadee, they sometimes pass the winter in this State, when they are almost invariably found in company with the Chickadee, which they greatly surpass in the activity and agility with which they hunt the almost barren twigs for food. I have seen them in January, within twenty-four hours after the thermometer had shown a temperature ten or twelve degrees below zero, appearing as active and comfortable as ever.

The length of this species is four inches, stretch of wings six and a half. Above, olive green; underparts, dull white; a line of white over each eye, above which is a line of deep black on each side of the head; between these black lines is an oblong spot of brilliant golden yellow, divided by a narrower spot of vivid flame color. These colors contrast admirably, and often form a conspicuous ornament as the bird is flitting among the trees. The female has the colors of the crest much paler.

This species much resembles the common Gold-Crest, or Golden-Crowned Wren, of Europe, and has been described as identical with it, as *Regulus cristatus*, though decidedly distinct.

Audubon described another American species of *Regulus*, (*Regulus Cuvieri*), dedicating it to Cuvier, but the only specimen yet known is the one shot by him in Pennsylvania on the Schuylkill, in June, 1812, on which the species rests.

The sub-family *Parinæ*, (the *Titmice*) comprise a group of very useful and interesting birds, being chiefly insectivorous, of which the common Chickadee may be taken as an example. In the ninth volume of the reports on the various Pacific Railroad expeditions and surveys, sixteen species are described by Prof. Baird as found in the United States, of which but two or three are found in New England, a great part of them having a western or southern habitat, several residing wholly west of the Rocky Mountains, and others are confined to the valleys of Texas and Mexico, and southward.

The CRESTED TITMOUSE (*Lophophanes bicolor*, Bonap.; *Parus bicolor* of earlier writers,) is occasionally seen in New York, and though its habitat is said to be the whole of eastern North America, it is extremely rare in Massachusetts, and southern New England generally, and there are but few authentic instances of its having been taken here. It is described by Wilson as "more noisy than the common Chickadee, more musical and more suspicious, though rather less active. It is, nevertheless, a sprightly bird, possessing a remarkable variety in the tones of its voice, at one time not much louder than the squeaking of a mouse, and a moment after whistling aloud and clearly, as if calling a dog; and continuing this dog-call through the woods for half an hour at a time. Its high, pointed crest, or, as Pennant calls it, *toupet*, gives it a smart and not inelegant ap-

pearance." Their food consists of insects and their larvæ, chiefly the latter during winter, with the addition of a few seeds. It builds its nest in a hollow tree, which it often excavates itself, and the female lays six eggs, pure white, with a few reddish specks at the larger end. It extends its migrations far to the north, inhabiting Greenland, and is occasionally met with in the north of Europe.

Length six inches; alar extent, seven and a half. Above, ashy black; forehead nearly black; beneath, whitish; sides, chestnut. Head with a high pointed crest.

The BLACK-CAPPED TITMOUSE, or CHICKADEE, (*Parus atricapillus*, Linn.) is the most common species of this group of birds found in New England, and is universally known as a familiar, noisy, very active and restless bird, and is a constant resident, braving our severest winters, and is said to be even abundant in the depth of winter as far north as Hudson's Bay. It is universally esteemed as a friend, and for the best of reasons, being a great consumer of a large variety of injurious insects, often making excursions to the orchard and shrubbery of the gardens, in fall and winter, from the woods where it resides the greater part of the year. In the coldest weather they will make the woods echo with their varied notes, as in company with Woodpeckers, Creepers and Nuthatches, they hunt the twigs, the larger branches and the bark of the trunk for dormant insects and larvæ, each in his peculiar way. In winter they feed upon the seeds of the hemlock and pine, and sometimes come about the farmer's door for crumbs to vary their scanty fare at this inclement season. Their agility is surpassed by but few birds, and when searching for food will cling head and back downwards in every possible attitude. They usually forage in small parties, and keep up a constant twitter of varied notes. They nest in hollow trees, the female sometimes making the excavation herself. The eggs are six, white, with a few minute specks of red. During the latter part of the summer the whole family hunt together, the parents guiding and feeding the brood, keeping up a constant chatter.

Length five inches and a half; alar extent, six and a half. Back, ashy brown; head and throat, black with a white patch between them; beneath, whitish, sides brownish. The thick covering of long, soft, downy feathers is admirably adapted to protect this bird from the severe cold of winter.

Another species of Titmouse, generally regarded as a bird of New England, is the HUDSON'S BAY TITMOUSE, (*Parus Hudsonicus*, Forster,) as the southern limit of its habitat is known to be within the Northern States, inhabiting from Massachusetts northward throughout eastern North America. In habits it differs but little from those already described, breeding in hollow stumps and trees, though in color more nearly resembling the Chestnut back Titmouse, (*P. rufescens*,) of the Pacific coast.

J. A. A.

Springfield, July, 1862.

Ox-Bor.—This is a cuticular insect, the egg being deposited externally in the skin of cattle, and the larvæ inhabiting a tumor or abscess formed around them. These tumors are usually found in the back or loins, and are often larger

than a pigeon's egg. When the fly is depositing its egg the cattle are in the extremest agitation and dismay, and sometimes become quite furious, running off, bellowing, at full speed. The larvæ in its cyst gradually enlarges, while the pus that is secreted by the irritation serves for its nourishment. The tumors which are produced are called *warbles*, *wormals* or *womils*. The skin and hide are permanently injured by being subjected to this process.—*Ohio Valley Farmer*.

MANURES.

Next to a systematic and energetic application of the powers of both mind and body to his profession, the *collection, preparation and application* of manure to the soil is of importance to the farmer. On New England soils, these must supply the basis of all profitable culture, and collected in suitable quantity, skilfully prepared and judiciously applied, they will certainly lead to thrift and independence. These will follow, even in this cold and variable climate, and on any of our lands that are managed by an intelligent industry.

The difficulty presented to the farmer in this matter, is *the want* of the materials themselves to swell his heaps. He naturally argues that he has so much hay, which, when fed out, will produce about so much manure, and in thousands of cases, little effort is made to change this state of things. Evidently, the first step towards improvement must be to change this condition by increasing the materials that are to increase our crops. This cannot be done without an outlay of labor, and it is this item of cost that deters so many persons from securing the necessary materials for large and valuable heaps of manure. This is an important omission, because this work forms the basis of all the future operations of the farmer, and absolutely prevents that progress and profit which would certainly flow from a more intelligent practice.

All farms furnish resources for these supplies, in a greater or less degree. On some there are leaves and ferns; on others head lands and balks, where the finest portions of the soil have been accumulating for a generation, in unsightly and inconvenient quantity—another has sea-weed thrown upon its margin or shells of various kinds that may be converted into rich materials; while some of them have marl, and a large proportion ample beds of meadow or swamp muck. There are various other resources, also, beside these and the usual products of the fodder crops, of which the farmer should avail himself, such as the waste of every kind from the house, hassocks from the meadows, small brush, tan bark, sawdust, shavings, &c., all of which are valuable materials when properly wrought up and tempered with lime, salt and ashes, or some other quickening agent. No labor on the farm can be more profitably expend-

ed than that devoted to this work, although a too common practice will scarcely verify our statement. Too little capital, either of labor or money, invested in this primary part of farm management, embarrasses all the succeeding operations of the farmer, and causes a great amount of labor to be performed that brings no productive results. It is as though the manufacturer should erect his mill, and supply the necessary material of cotton and wool, but provide no power to propel his machinery.

THE IDEA OF THE SPINNING-JENNY.

Suddenly he (James Hargreaves) dropped on his knees and rolled on the stone floor at full length. He lay with his face toward the floor, and made lines and circles with the end of a burned stick. He rose, and went to the fire to burn his stick. He took hold of his bristly hair with one hand and rubbed his forehead and nose with the other and the blackened stick. Then he sat upon a chair, and placed his head between his hands, elbows on his knees, and gazed intently on the floor. Then he sprang to his feet, and replied to some feeble question of his wife, (who had not risen since the day she gave birth to a little stranger,) by a loud assurance that he had it; and, taking her in his sturdy arms, in the blankets, the baby in her arms, he lifted her out, and held her over the black drawings on the floor. These he explained, and she joined a small, hopeful, happy laugh with his high-toned assurance, that she should never again toil at the spinning-wheel—that he should never again “play,” and have his loom standing for want of weft. She asked some questions, which he answered, after seating her in the arm-chair, by laying her spinning-wheel on its back, the horizontal spindle standing vertically, while he made the wheel revolve, and drew a roving of cotton from the spindle, into an attenuated thread. “Our fortune is made, when that is made,” he said, speaking of his drawings on the floor. “What will you call it?” asked his wife. “Call it? What an we call it after thyself, Jenny? They called thee ‘Spinning Jenny,’ afore I had thee, because thou beat every lass in Stanehill Moor at the wheel. What if we call it ‘Spinning Jenny?’”

THE DRAFT AND THE FARMERS.—The Chicago *Times* thinks the order for drafting comes very opportunely, so far as the farmers are concerned. By the time operations will have fairly commenced under it, the harvests will have been generally secured, and farmers will have an interval of a couple of months before it will be necessary to sow the fall wheat. If they are economical in time and means there need be but little if any diminution in the amount of land sown. Calculating the time for the 300,000 men called for nine months to begin on the first of September, they will be entitled to discharge on the first of May, which will enable them to return home in time to assist in putting in the spring crops. It would seem as if this had been considered in making the call, as under it we may hope there will be no material lessening of the agricultural products of the country in either the present or coming year.

THE BEAUTY OF THE GRASS.

It seems as if nothing could be said under this head, because, in truth, there is so much to say. To get a good idea of the beauty of the grass, endeavor, in imagination, to form a picture of a world without it. It is precisely to the scenery of nature, what the Bible is to literature. Do you remember that idea of Froude's, that the Bible had been obliterated, and every other book had thereafter lost its value, and literature was at an end? Take away this green ground color on which Dame Nature works her embroidery patterns, and where would be the picturesque scarlet poppies or white daisies, or the gray of chalk cliffs, or the golden bloom of a wilderness of buttercups? Its chief service to beauty is as the garment of the earth. It watches night and day at all seasons of the year, “in all places that the eye of heaven visits,” for spots on which to pitch new tents, to make the desert less hideous, fill up the ground work of the grandest pictures, and give the promise of plenty on the flowery meadows where it lifts its silvery and purple panicles breast high, and mocks the sea in its rolling waves of sparkling greenness. It is beautiful when it mixes with *oupine* and *turritis* on ruined bastion or gray garden wall; beautiful when it sprinkles the brown thatch with tufts that find sufficient nourishment where green mosses have been before; beautiful when it clothes the harsh upland, and gives nourishment to a thousand snow-white fleeces; still more beautiful when it makes a little islet in a bright blue mountain lake, “a fortunate purple isle,” with its ruddy spikes of short-lived flowers; and precious as well as beautiful when it comes close beside us, in company with the sparrow and robin, as a threshold visitant, to soften the footfall of care, and give a daily welcome to the world of greenness.

“If a friend my grass-grown threshold find,
O, how my lonely cot resounds with glee.”

Is it only for its velvet softness, and the round pillowy knoll it heaves up in the vistas of the greenwood, that the weary and the dreamer find it so sweet a place of rest? Or is it because the wild bee flits around its silvery panicles, and blows his bugle as he goes with a bounding heart to gather sweets; that the hare and rabbit burrow beneath its smooth sward; that the dear lark cowers amid its sprays, and cherishes the children of its bosom under its brown, matted roots; that the daisy, the cowslip, the daffodil, the orchises—the fairies of the flower-world—the bird's foot trefoil—the golden-fingered beauty of the meadows, the little yellow and the large strawberry trefoil, are all sheltered and cherished by it; and that one of its simple children, the *Anthoxanthum odoratum*, or sweet-scented vernal grass, scents the air for miles with the sweetest perfume ever breathed by man?

AN OX OR COW that is accustomed to throwing fences, may be prevented doing so by taking a large wire and bending it in the shape of a bow; then bend the points in the shape of a fish-hook; tie two strings to the wire, place the hooks in the nostrils lightly, and tie one string to the point of each horn. This will prevent the most unruly ox or cow from throwing fences.

For the New England Farmer.

AGRICULTURE.

Agriculture was the first occupation of man. Many of the most distinguished men, in every age of the world, have been cultivators of the soil. They thought it no dishonor to obey the Divine injunction, and earn their daily bread by the sweat of their brow. Some of the ancient nations esteemed agriculture as the most honorable of pursuits. Indeed, it is the foundation of all other pursuits. Were it not for the produce of the soil, there would be no commerce, no intercourse between nations, ships would rot at their docks, merchants would have to leave their counting rooms, and the whole human family would soon experience a day as dark as the one Lord Byron's imagination saw.

Agriculture spreads the table from which we obtain nourishment, to strengthen these weak and decaying bodies. The manufacturer cannot flourish, without the aid of the farmer. Every new wheel which is set in motion depends upon the farmer for the raw material to manufacture into cloth. Where the cultivation of the soil is held in low estimation, we see no thriving cities, no centres of commerce or trade, no railroads or telegraphs, no civilized society; nothing but a low, degraded race of barbarians. No nation can be prosperous and wealthy, without the development of its agricultural resources. The agricultural classes are the sovereigns of our country, and will control its political destinies in future ages.

How many young men we see, who act as though they thought it beneath their dignity to till the soil and earn their daily bread! They seem to think that everlasting disgrace would come upon them, if they should be seen hold of the plow or the hoe! So they look with scorn upon the farmer's lot, and die in the poor-house. How many people there are, who think that the ignorant ought to cultivate the soil, and the more learned follow other pursuits. It is a great mistake. Agriculture is a science; and ought to be studied just as much as any other science, if we wish to be successful farmers. A few more brains with the muscles, would improve the soil very much.

Some complain that it is unpleasant work to cultivate the soil. I do not agree with that class of persons. I delight, with a good team and plow, on a beautiful spring morning, when the merry birds sing sweetly upon the sunny hill-sides, and all Nature seems alive with music, to go forth into the field, and turn the furrows over, and view Nature in her most beautiful aspect. The surrounding scenery points me upward to Nature's God, and fills my heart with gratitude and praise to the Giver of every good and perfect gift. There is no class of people in the world who enjoy life so well as independent farmers. The man who owns the land which he cultivates, (perhaps it has cost him many years of hard labor, or it may be it is the old homestead, where his father lived before him, and his heart is bound to it by a thousand sacred ties,) is truly in a position to enjoy life's sweetest blessings.

OLIVER P. MEAD.

Middlebury, Vt., 1862.

THE violet grows low, and covers itself with its own tears, and of all flowers yields the sweetest fragrance. Such is humility.

THE ELM TREE WORMS.

A successful mode of eradicating these pests would seem to have been discovered in Connecticut. A few years since, New Haven, very properly designated "the Elm City," bid fair to lose its right to the cognomen, by the total destruction of its elms, so completely were they overrun and stripped annually by the worms. The authorities, however, very wisely took under their charge all the trees, whether before private property or in the public parks and grounds, and commenced a uniform plan for their protection. Around each tree was placed a bandage of fine straw, so arranged as to present a bristling barrier to the upward march of the worms; above this a leaden trough was placed, surrounding the tree, which was filled with oil and furnished with a projecting roof of the same metal. If any of the worms succeeded in surmounting the barrier of straw, they were caught in the oil, and care was taken to have all so caught regularly taken out and killed, so as to leave the trap clear. The effect of these precautionary measures seems to have been to eradicate the worms almost entirely, and the noble elms of New Haven never appeared to better advantage than at the present time.

YANKEE INVENTIONS ABROAD. — The London *Times* thus notices a few of the machines in the American Court of the Great Exhibition:—

After the models and gigantic engines in the Western Annexe, the very ingenious small hand-labor saving machines in the American Court are the most looked after. One of the most curious of these is the machine for milking the four teats of a cow at the same time, and in a manner precisely similar to the action of the calf's mouth upon the teat. In point of time, labor and cleanliness, the operation of the machine is said to far surpass milking by hand; and the right to use the patent in this country was yesterday sold, we believe for a very large sum. In this court also is a very ingenious machine for making paper bags, which turns them out folded, packed, dried, and finished at the rate of forty a minute. The cork-cutting, "planting," and rope making machines here are especially worthy of minute examination, and some of the washing machines are quite marvels of inventive skill—almost approaching to the inspirations of genius in the simple means by which their great results are effected. This court is worthy of even a more extended notice than it has yet received from the mass of visitors.

FLANNEL.—Flannel should be worn summer and winter, during the day, but should be taken off at night. In summer it allows the perspiration to pass off without condensing upon the skin, and prevents the evil effects of the rapid changes of temperature to which we are liable in our changeable climate, when out of doors. In winter, as a non-conductor of heat, it is a protection against cold. At night, the flannel jacket or jersey should be exposed to a free current of air and allowed thoroughly to dry; it should never be put in a heap of clothes by the bedside. Flannel is usually only worn over the chest and abdomen.

For the New England Farmer.

THE BREAD AND BUTTER MACHINE.

BY MRS. MADELINE LESLIE.

"It has come, mother! It's come, Etty! The machine has come! The express man is taking it out of his wagon, hurrah! Now we'll have some bread in a trice!" and the excited boy swung his cap in the air as he bounded down the steps.

Excuse me, dear reader, for introducing the respectable family of Mr. James Franklin Allen in such an unceremonious manner; but, really, to the parties concerned, the occasion was a most exciting one, which must be my apology.

Now that the machine has been safely deposited on the kitchen table, and the express man, having received his pay, has turned his weary horses from the door, allow me to explain that the aforementioned Mr. Allen was what may be called a merchant-farmer; that is, he made money easily at his store in the city, and spent it laboriously on a few acres of land, which he was trying to rescue from the imputation of having run out. Certain it was, that whatever else did not grow on the farm, the yield of sorrel was very abundant, enough to furnish cures for all the sore throats in the State. Mr. Allen, however, was a man who, having put his hand to the plow, did not look back. Not he. The third year a peat meadow was added to his acres, the mud from which he was well assured would assimilate with his gravelly soil, and thus produce rich bottom land. In a few years his predictions began to be verified. He now added the *Ploughman* and the *New England Farmer* to his list of periodicals, read with interest notices of all the county and State fairs, and even aspired to some of the best premiums.

Noticing one day an advertisement of the prize offered for the best bread at the coming fair, he instantly determined that his daughter Etta should contest it with her neighbors, from flour made of his own wheat. To stimulate her ambition still further, he offered an additional premium of ten dollars, if she would win the silver cup from all competitors.

From this time forth there was a vigorous collection of receipts for making yeast and mixing bread, the excitement reaching its culminating point when, one evening, Mr. Allen returned from the city with the news of a bread and butter machine, the latest production of the genius of our American inventor, THOMAS BLANCHARD, Esq., of Boston. After the announcement of this new aid to her plans, it could not, of course, be expected that Miss Etta would give herself or her father a moment's rest until he had promised to purchase one immediately for her use.

The arrival of this wonderful machine was, therefore, the occasion of Master Walter's excitement at the commencement of this story. In justice to its merits, it ought to be described without further preamble.

On tearing off the coarse matting which enveloped it, a small tub was found, fastened by a large iron pin into an iron stand by means of a groove, in which it turned with great ease. The stand could be fastened by wooden screws upon any table, and thus rendered firm for the work of kneading. Running up from one end of the stand or supporter, to the tub, was a bar of iron into which a lever was attached, which was the propelling

power for the business. About midway of the lever was a wooden, concave shovel just fitting to the size of the tub, which, when worked horizontally by the lever, carried the dough from one side of the vessel to the other, mixing, kneading and making into loaves ready for the pans. If it was more convenient to allow the bread to rise without moving it from the tub, the lever was raised and turned back out of the way, and the dough left without any waste of materials, ready, when risen, for the second and third kneading.

Having heard her father's explanation, Etta was all eagerness to give her machine a trial. Putting on a large apron, therefore, she ran to sift her flour, measured it and poured it into the new tub, which her mother had carefully cleansed; then adding her light, frothy yeast and lukewarm water, she proceeded to work the lever to mix the dough, the entire family standing around to watch the experiment.

"Shove it back and forth," said her father, "in this manner; you are not ready for the kneading, yet."

"You will need more flour," suggested the experienced mother. "It is a good rule to mix in flour until it has done sticking."

"O, see how nicely the shovel clears it from the sides of the tub!" cried the laughing girl. "I'm sure, for one, I thank Mr. Blanchard. It *does* work beautifully!"

"Yes, it is a complete success," remarked the merchant-farmer, "and if not so remarkable as his machine for turning marble or plaster busts, or his patent for making gun-stocks, yet I prophesy that Mr. Blanchard's name will long be remembered in connection with his bread and butter machine."

"Can it churn, too, father?" cried Walter, his eyes growing large with astonishment.

"No, not churn, my boy, but you can see by the motion of your sister in making the bread, that the butter when churned, could be thoroughly worked or separated from the milk, by pressing it up against the sides. You, or any one, could do that under the direction of your mother."

Walter gave a scream of joy. "Can you churn to-day, mother?" he asked.

"No, not to-day. We must not disturb Etty's bread till it is ready for the oven. Now, turn it over, Etty, and leave the top smooth."

"I feel quite sure that I shall win the prize," exclaimed the young girl, gazing with evident pride at the nice, white, well-mixed dough in the tub; "and only see, not even a dust of flour on my hands."

"But mother threw in the flour from the scoop, for you," cried Walter.

"Yes, but another day I could do it quite as well, myself. I can't expect to have such an admiring audience every time I mix bread."

"Here is another convenience," said Mr. Allen, smilingly untying a paper bundle which he had quietly withdrawn from their notice. He held up a flat, round piece of hard wood, which he assured them fitted exactly into the bottom of the tub, and then a sharp knife which could be fastened to the wooden shovel, thus acting as an extensive cutter for mince-meat or sausages.

"Well, really, now, Miss Allen!" exclaimed Hannah, the girl of all work, who had been gazing at the group and reflecting in amazement at the

progress of art, "I do believe the millennium day is a-coming! Don't the Bible say knowledge will be a-running to and fro through the earth, and hasn't it run out to our farm in the shape of a bread and butter and sausage machine? It *does* seem to my mind that we oughter be setting our houses in order, when the work it took our mothers, hours to accomplish, is done without hands. I'm free to say, ma'am, it makes me solemn."

At tea, the family had an opportunity to test the excellence of the new bread, which, without a dissenting voice, was pronounced "first-rate."

Walter, in his zeal, went so far as to shout, "Hurrah for the bread made without hands!" but instantly blushed crimson on receiving a gentle reproof from his father.

"What a blessing," remarked Mrs. Allen, "this invention will prove in large boarding-houses, where a third of a barrel of flour is mixed at once."

"Yes," replied her husband, "a lady told me today, in the city, that she not only made bread in hers, but gingerbread and fruit-cake, putting together all the ingredients, and giving the whole a thorough beating with little comparative labor."

"I shall want to carry my machine to the fair," cried Etty.

"Mr. Blanchard will probably send one, not only to our county, but to others through the State," rejoined Mr. Allen, "and I have no doubt they will excite great interest wherever they are seen."

REMARKS.—Excellent. "Progress" is the word, in everything that is good—everything, especially, that makes lighter and cheaper the labor of the kitchen, that must of necessity continually occur. Bread-making, we believe, is work that women do not particularly like. They do not dread it, perhaps, but it is not an attractive labor, so that if bread can be *well* prepared, as would seem by the glowing language of our correspondent, it is certainly an important step in the right direction. We shall endeavor to find the machine, and test its merits.

For the New England Farmer.

PLOWING IN WINTER GRAIN.

MR. EDITOR:—I have a piece of pasturing which was broken up in June. I intend to cross-plow and harrow it, and then *plow* in the grain, instead of harrowing it, as I think is the general practice. The idea was suggested to me by a brother farmer in town, who said that when he sowed winter wheat the last of August or first of September, and plowed it in, he was pretty sure of a good crop, even on rather light, plain land, if properly manured.

I wish to inquire if other persons have had a similar experience, as I think of sowing a portion of my piece with winter wheat.

I wish to say a word in relation to king-birds and bees, suggested by an article on that subject in the *Farmer* of August 9th.

I have nine swarms of bees and four king-birds, that is, there are four which have made my premises their head-quarters, though I have several times destroyed their nest, as I am fully convinced

that, so far as bees are concerned, these birds should not be allowed to increase and multiply. I have watched them sometimes, as they darted through the air, and seized the *returning* bees, which I supposed they devoured, but according to the article to which I have referred, they only extract the honey from them. I have also noticed them when feeding their young, which, of course, was on honey only, that they might have a sweet tooth, and as they grew older, gratify it even by murder, pillage and robbery.

Now, Mr. Editor, for one I say, down with the king-birds and rebels.

A. C. W.

Leominster, August 11, 1862.

REMARKS.—Do not exterminate them without careful examination. Shoot one or two that you have supposed had taken the bees and examine their crops. If you find bees, or honey there, it will be well to consider what course should be pursued in regard to them. The king-bird is one of our beautiful and active birds, whose place could scarcely be supplied by any other.

For the New England Farmer.

WINTER WHEAT.

MESSRS. EDITORS:—The subject of raising winter wheat is undergoing a revived discussion in this vicinity, if not through all New England. I have often heard ministers preach the importance of enforcing line upon line and precept upon precept, upon their dull hearers, that the impression might be so durable as to produce valuable practical results. Mr. Henry Poor, formerly of North Andover, now of Brooklyn, N. Y., by his perseverance year after year in keeping the farmers of New England awake on the subject of raising winter wheat, has truly been a benefactor to his country. The lacking of faith, as well as excessive credulity on farming, as on religious subjects, is a great obstacle to progress.

I have read Mr. Poor's communications on wheat-raising from the first, but so little faith had I in making the attempt to raise wheat on my Wilmington land, that I did not even try the experiment. Two years ago, my son, (with more hopeful organs,) bought six quarts of winter wheat and sowed it upon about a quarter of an acre of unmanured, sandy land, the last of August, 1860; the work was done in a hurried manner and left in an unpromising condition. On the 23d of July nearly four bushels of good wheat was cradled, notwithstanding severe drought and bad cultivation. On the last of August and first of September, 1861, he sowed about an acre where a crop of oats had been taken off; a light dressing of compost was plowed under with the oat stubble; it came up well, but nearly half was winter-killed. This little field was harvested on the 6th inst., promising a good yield of fine, plump wheat, a discount being made for the winter-killed.

The advantages of raising wheat over corn and rye are very apparent. The operations of planting and hoeing corn two or three times, the liability of its being frost-bitten, cutting the stalks, harvesting, husking and shelling are considerations worthy of the farmer's notice in settling up his bills. The same quantity of manure applied

to an acre of winter wheat which we apply to an acre of corn, an half-bushel of seed, sowing, plowing and harrowing constitutes the labor and expense till harvesting, which may be done by a good cradler in a few hours, the risk of a crop to each is about equal. Now look at the labor of raising corn and wheat, and see how the balance stands. If we can raise 25 bushels of wheat to the acre, on land that would produce 45 bushels of corn; at \$1.35 per bushel the wheat would amount to \$33.75, and the corn to \$29.25. The expensive and laborious process of raising corn must, I think, yield to the less expensive operations of raising wheat, and the wheat crop prove most profitable.

August 5.—According to appearances, our winter rye will not produce much over half as many bushels to the acre as the wheat will, although grown within a few rods of it. SILAS BROWN.

North Wilmington, August, 1862.

N. B.—My most respectful regards to **, and the subscriber would feel much gratified to have the Stars make a visit to the State Alms-House farm and see if he finds it "barren in extreme."

S. BROWN.

RAMBLES IN THE COUNTRY.

GENTLEMEN:—Having finished the English hay harvest "through much tribulation," on account of the "catching weather," and having a strong desire to see something more of our good State, and to mingle with brother farmers in some towns not heretofore visited, I started from Concord on the fifth instant, in an open wagon, with a steady old horse that had no surplus energy to expend in "highfaluting," either in running, kicking or shying—but whose gait was so slow and dignified as to afford me ample opportunity to notice the crops and the agricultural condition of the country as we went along. My travel was west, the intended terminus being the Hoosac mountains, and to reach them I passed through the centres, or some portion of the following towns: Concord to Acton, Stow, Bolton, Sterling, Boylston, Princeton, Hubbardston, Barre, Dana, Greenwich, Enfield, Belchertown, Amherst, Hadley, Northampton, Westhampton, Norwich, Huntington and Chester. Then turning more directly west, to Worthington, Peru, Windsor, Savoy, into the village of South Adams, and slept on the banks of the rippling Hoosac river. Turning to the south, I passed through Cheshire, Lanesboro', Pittsfield, and then east to Dalton, Hinsdale, Middlefield, Huntington, (a new town,) Blandford, Montgomery, Russell, Westfield, Springfield, and from thence by railroad to Boston.

In this jaunt of about a week I have seen and learned more of that portion of the State, than I could have done by travelling in the cars for months. The cars are convenient for the man of business, and well enough when a remote point is to be quickly reached. But to gain any reliable knowledge of the people, or of the condition of

agriculture, in travelling by them, is out of the question. Many travellers lose more than one-half of the pleasures of a journey by rushing from one point to another. They find no incidents of interest *by the way*, and the grand goal is almost as barren when they have reached it. To me, when I am in the country, every mile has its charms, whether on mountain, plain or valley, or whether it rain or shine or blow. Nature, every where, is so profuse in beautiful and beneficent things, that travel never ceases to excite study and admiration. He who sees the land all barren as he goes, will never find the elixir he seeks at the end of his journey! The true traveller, like the true philosopher, will find his pleasures as he passes along. In the rocks and grand old trees will he find them, on the hill-side, in the purling brooks or the tumbling waters of the rapid streams. Every face will beam kindly upon him, and out of every mouth he may gather some wisdom worth adding to his own stock. The *pursuit* of happiness is usually a vexatious and profitless labor.

"From our own hearts our joys must flow,"

and if they do not find their seat and centre there, no crystal hills, translucent waters or mountain air will be likely to supply them. "God made the country and man made the town." Both are good—both necessary—but the mind will never expand in the contemplation of the town as it will on lifting up the eye among the green hills which surround me here, and by association with these dwellers among the mountains.

CHESHIRE is in Berkshire county. Hayward's Gazetteer of 1849 contains a brief account of it, which says that "the centre of the town, through which the south branch of the Hoosac runs in a northern direction into Adams, is a rich and fertile valley. To the east and west of this, the ground gradually rises into hills and mountains. The township is admirably fitted for grazing, to which the attention of the inhabitants is principally turned; though considerable quantities of grain are raised. Extensive and valuable dairies are kept, and the *Cheshire Cheese* has acquired a wide and merited celebrity. The famous *mammoth cheese*, presented to President Jefferson, January 1, 1802, contributed much to bring this town into notice. On a given day, the dairy-women sent their curds to one place. The quantity was too great to be pressed even in a cider mill; so that in addition to the intended present, three additional cheeses were made, weighing seventy pounds each. The mammoth cheese weighed about *one thousand four hundred and fifty pounds*. Mr. Jefferson sent back a piece of this to the inhabitants to satisfy them of its excellence; and he also sent pieces of it, it is said, to the governors of the several States."

At the farm of Mr. LUTHER D. WOOD, in this town, and through the kind attentions of his wife, I saw an excellent sample of the famous *Cheshire cheese*. I was admitted to the dairy-room, which was the perfection of neatness, and there, in all their richness and fair proportions, saw fifty cheeses upon the shelves, weighing, in the aggregate, about *two thousand and five hundred pounds*, an *equal amount* having been sent to market in the month of June! These were "new-milk" cheese, as they are termed, which means that they have all the *cream* that the milk contained. This *five thousand* pounds of cheese had been made this season before the middle of August, from a dairy of sixteen cows. In appearance, I have never seen finer cheese. Each one was encircled with a strip of cotton cloth, it being too rich to hold together without such help. Thanks to Mrs. Wood for the opportunity of looking at her cheese dairy, the first I have enjoyed for many years. Back of the house were *thirty-eight* swarms of bees, busily engaged in bringing their luscious stores from the wild mountain-flowers and the white clover of the valleys. The best honey I have found is made from the blossom of the wild raspberry, and these abound in all this region. Mr. Wood had eighteen swarms only in the spring, and they had increased to thirty-eight. Not half the attention is given to the culture of bees that the business deserves in this mountainous region. Truly, the land abounds with milk and honey; the evidence was before me; industry and skill are only required to gather them in and make the household glad. I saw large boxes of most excellent honey, which is sold for a shilling to twenty cents per pound. I suppose *tons* of this highly-prized luxury are left uncollected every year, in this State, much of which might be saved by a little pains in the keeping and care of bees.

The face of the country through which I passed is extremely diversified. After leaving Sterling—one of the most excellent agricultural towns I have seen—old Wachusett, and the lofty hills in its region, came into view, and still beyond them the dim outlines of miniature Alps are seen as far as vision can extend. Most of the valleys are very narrow, rarely expanding to the width of a hundred rods. These are cultivated, however narrow, so that a corn or oat field may frequently be seen containing less than a dozen square rods. Many of the hill-sides are without stones, and in places that can be approached with a team, I occasionally see small cultivated fields. Grass, however, is grown upon them where the hay cannot be taken away by oxen or horses, but is rolled down the hill, or "toted" down with poles, or, perhaps, as is done in some of the mountain towns in New Hampshire and Vermont, got down on sleds. The process of hay-making here is slow and tedious,

and in consequence of the frequent rains this season, a discouraging one. Where the land swells into vast hills, only, the extent of the hay-fields is very great. I have passed thousands of acres, having excellent crops, waiting for the mower to come and get it. The land seems admirably adapted to grass, and yet I have not seen stocks of cattle, horses or sheep, or barns, which indicate that a large amount of hay is cut and fed out. What becomes of such an amount as is on the ground this season, I cannot learn, although my inquiries have been somewhat minute on this point. The English hay is not yet half cut, though it is now the 10th of August.

The crops look well all along my route. There is little Indian corn, compared with what is raised in Middlesex, Essex and Norfolk counties. The oat crop, I think, was never better. A large space is covered with it, owing to their high price in the spring, and the demand for them which it was supposed would continue through the year for army uses. Barley is good, although I have seen but few fields of this grain, or wheat in this region. There is little orcharding, compared with the eastern portion of the State, and a large proportion of the trees, which I see from day to day, are of ungrafted fruit.

I have said that I slept one night on the banks of the brawling Hoosac river. This stream passes through the centre of the town of Adams, from north to south. On the northern side of the town, *Spruce Hill* looms up 2,588 feet from the level of the sea, and *Old Greylock* looks down upon the busy villagers from his height of 3,505 feet. *Peru Hill*, upon which stands one of the great, square churches, of a past generation, two or three stories high, rises 2,239 feet above the sea level; and, at a distance, the vane on the church seems to rise about as much more! The village has four dwelling-houses, from one of which no smoke ever rises from the chimney, with "nary" a blacksmith shop, store or school-house!

All along the Hoosac river and the two or three streams which unite and form the Westfield river, there are mills for the manufacture of various articles of wool, cotton, iron and wood. Where several mills are near each other, there springs up a village of more or less consequence, which becomes the centre of business and town meetings, leaving the old, original village deserted and dismal, and with scarcely any thing left but its name. In these, there are rarely any signs of fresh paint, poetry or pluck, but things look seedy, dull and decaying.

In the woods, in the town of Huntington, (a new town, I suppose, as I cannot find it on any map,) I came across a mill where the manufacture of *wooden bowls* is carried on, and I paused half an hour to see the process of making. They are made,

principally, of rock maple, but sometimes of beech or yellow birch. The log is sawed off of the right length, and again longitudinally. It is then put into the lathe, and the outside of the log taken off, leaving the *outside* of the *first* bowl that is to be made from the log, completely formed. The chisel used is a little longer than the depth of the bowl, and shaped just like the curve of the bowl which it forms. There were six bowls made from the half log which I saw turned out, and the work was done in *thirty minutes*. The bowls were beautifully formed, and left very smooth. The largest was twenty-six inches across the top, and the smallest about ten. I had often wondered how this work could be done, but on seeing it found the process simple, and very ingenious. I have seen and heard many interesting things in my jaunt, some of which may be alluded to hereafter.

Very truly yours, SIMON BROWN.

MESSRS. NOURSE, EATON & TOLMAN, BOSTON.

TIME.

Many are the matches which I have had against time in my time and in his time (*i. e.*, in time's time.) And all such matches, writing or riding, are memorably unfair. Time, the meagre shadow, carries no weight at all, so what parity can there be in any contest with him? What does he know of anxiety, or liver complaint, or income tax, or of the vexations connected with the correcting of proofs for the press? Although, by the way, he does take upon himself, with his villanous scrawl, to correct all the fair proofs of nature. He sows canker into the heart of rosebuds, and writes wrinkles (which are his odious attempts at pot-hooks) in the loveliest of female faces. No type so fair, but he fancies, in his miserable conceit, that he can improve it; no stereotype so fixed, but he will alter it; and having spoiled one after another, he still persists in believing himself the universal amender and the ally of progress. Ah! that one might, if it were but for one day in a century, be indulged with the sight of Time forced into a personal incarnation, so as to be capable of a personal insult—a cudgelling, for instance, or a ducking in a horse pond. Or, again, that once in a century, were it but for a single summer's day, his corrected proofs might be liable to supersession by *revises*, such as I would furnish, down the margin of which should run one perpetual iteration of *stet, stet*; everything that the hoary scoundrel had *deleted*, rosebuds or female bloom, beauty or power, grandeur or grace, being solemnly reinstated, and having the privilege of one day's secular resurrection, like the Arabian phoenix, or any other memento of power in things earthly, and in sublunary births, to mock and to defy the power of this crowned thief, whose insatiate scythe mows down every thing earthly.—*Thomas De Quincy.*

STAMPING FRUIT.—A German journal publishes the following: At Vienna, for some time past, fruit dealers have sold peaches, pears, apples, apricots, &c., ornamented with armorial bearings, designs, initials and names. The impressions of

these things are effected in a very simple manner. A fine fruit is selected at the moment it is beginning to ripen—that is, to take a red color—and paper, in which the designs are neatly cut out, is affixed. After a while, the envelope is removed, and the part of the fruit which has been covered, is brilliantly white. By this invention the producers of it may realize large sums.

For the New England Farmer.

NOTES FROM THE MONOMACK.

BY SAGGAHEW.

A WALK THROUGH MY GARDEN.—(*Continued.*)

In my last "Notes" a brief description was given of the cold grapeery. I may add here, that the fruit continues to look well, and that bunches on the "ringed" spurs have already (Aug. 5) commenced to "color."

The general plan of the garden is, in brief, the following: There is a row of vines next to the fence, on all sides, then comes a walk, and inside of the walk the ground is filled with fruit trees, at equal distances of eight feet apart. In each corner of the garden is a standard apple tree. In the outside row of trees, standards and dwarfs alternate, the central rows being almost wholly dwarfs. Between the trees, each way, are planted currants—a single bush in each space—and in the centre of each square thus formed is planted a vine. These currants and vines will be removed whenever the trees need the whole ground. Thus much for the general plan, and now a few notes on the *Out-Door Grapes*. Of the 520 feet of fence enclosing the garden 350 feet is lined with a wire trellis. This trellis is made by stretching six strands of No. 11 annealed wire along the inner sides of the fence posts, at one foot apart, making the trellis six feet in height. The wires are fastened to each post by a wire staple, (No. 8 wire,) and were drawn sufficiently taut by a simple clamp, or pair of wooden tongs, made of two strips of fence pickets, between which the wire was clapsed. The cost of the wire was seven cents per pound, and the amount used was 90 pounds, making a total cost of \$6.30 for 340 running feet of trellis. The labor of putting it up was about one day each for two men. Another trellis is made by setting cedar posts, seven feet long, about thirty inches into the ground, along the top of which (about four feet from the ground,) is nailed, flatwise, a spruce joist, of 2×3 inches, and about fifteen inches from the ground is nailed a strip of board about six inches wide. To these are nailed vertical slats, made by sawing spruce boards into strips of three-fourths inch thick. To make the trellis somewhat ornamental, these slats are placed "diamonding," at eight inches apart. Considering its durability and neat appearance, I think this the best cheap trellis for gardens I have seen.

The number of vines in the garden is about 160, including fifty-two varieties. Several distinct methods of training are practiced, varying according to location of vines, habits, and objects in view. One row of Hartford Prolifics are planted six feet apart, and trained upon the "long rod renewal" method; a row of Concord's are but two feet apart, and trained upon the "single cane dwarf renewal" method recommended by Bright, in his

Grape Culture; another row of vines are placed three feet apart, and trained according to the old "single cane renewal" of the books; and several vines are allowed to ramble pretty much as they please; the principal care being to keep up a good stock of bearing wood.

Thus much for the trellises, and training, and now for a few notes upon the different varieties of grape.

Allen's Hybrid.—A pot vine of 1861; now making a fair growth, of very handsome wood; expect it will prove worthy of general cultivation a little further south—and perhaps here.

August Pioneer.—A layer of 1861; has made a vigorous growth; said to be a desirable, hardy fruit, but I doubt if it comes quite up to its ministerial recommendation.

Blood's Black.—A layer of 1861; fair grower.

Black Seedling.—Strong grower; promises well for a wilding seedling.

Clark's Seedling.—A layer of 1861; has not grown well with me; one died, and this one started late, and grows feebly—probably was layered from the last year's wood; is well spoken of by those who ought to speak truly.

Clinton.—One of the feeblest growers I have; layers of 1860, planted 1861, have made but little wood, and show no signs of fruit; expect it to be desirable in New England as a wine grape.

Canadian Chief.—A pot vine of 1861; feeble growth; do not expect much from either vine or fruit, though, from its origin, and handsome bunches, I wish it may prove desirable.

Cuyahoga.—A pot vine of 1861; feeble; expect it to prove desirable.

Canby's August.—A layer of 1861; feeble growth, and very small foliage.

Concord.—Vines of one to five years old; strong growers; out of thirty-three have not lost one; layers of 1859, planted 1861, show a goodly number of handsome bunches; stands very near the head of the list of desirable out-door grapes for this latitude. One row of twenty-seven vines is trained according to Bright's method—*i. e.*, each vine is allowed to grow but one cane, which is fruited one year, and then cut down, and next year a new cane is grown, to fruit the year after. In this way a crop is grown every other year. By cutting down every other vine each fall, I have a fruiting cane every four feet. This is a very simple method, and will return good crops, but it costs more to stock a vineyard than by most other methods. The Concord thus far behaves admirably under this discipline.

Delaware.—Pot vines of 1860, planted 1861, made a feeble growth the first year, (one-half of them dying outright,) but this year will give single canes of four to six feet of good wood. Very hard to propagate, either from eyes or layers. For quality of fruit, and hardness, this stands at the head of the list of out-door grapes, but I expect it will soon be eclipsed by a larger variety. Thus far I find it rather a troublesome vine to train, on account of its disposition to send out numerous laterals. But as at present advised, I consider it the leading grape, for vineyard or garden. It leaves little to be desired, except *size*, and that I shall doubtless secure ere long.

Dracut Amber.—Three year old layer when planted, 1861; made rather poor growth last year; this year growing finely, but only set one feeble

bunch of fruit; is spoken of as a fair table-grape, but promising well for wine. From Dr. Jackson's analysis, I am inclined to the opinion that it may prove worthy of general cultivation for wine purposes; but it must show greater bearing qualities than as yet with me, or it will be passed to the rear.

Diana.—One vine five years old, planted 1860, made good growth, but shows only a few very poor bunches of fruit; find it slow getting layers from it. Of fifteen purchased layers of 1860 planted in 1861, only five survived, and they have not yet shown much vigor; of some eight or ten planted this year, all have made a moderate growth. Late and uneven ripening are serious objections to this otherwise desirable grape.

Early Isabella.—Said to be a seedling of the old variety, but two weeks earlier. Appears and grows much like the original, and a specimen of fruit on layer of 1861 throws a doubt on its early ripening.

Empire.—Layer of 1861; a very vigorous grower; smooth leaf, and badly eaten by insects, and so far as present appearances indicate, it is too succulent and tender for this latitude.

Early Hudson.—Layer of 1861; strong growth, and looks promising.

Franklin.—Layer of 1861; a fair growth.

Garrigues.—Layer of 1861; a very vigorous grower; looks well.

Granite State.—A very strong grower; fair-sized bunches, but berries now twice the size of either Concord, or Hartford Prolific. Said to be a fair table grape; not yet proved for wine; ripens 1st to 10th September.

Hartford Prolific.—Of twenty layers of 1860, planted 1861, every one made a very vigorous growth, and several ripened a specimen of fruit; propagates early; vines this year have double the fruit of Concord's one year older; evidently a great bearer. Is a fair table grape, and analysis speaks well for its wine-making qualities. Deserves more attention here at the north-east.

Isabella.—More mildew on one vine, than on all my other varieties put together; crops very nearly ruined.

Jennings.—Layer of 1861; good growth; looks well, and is well spoken of.

Logan.—Layer of 1861; good growth.

Louisa.—Similar to Isabella; said to be earlier; layer of 1861; vigorous growth.

Marion.—Layer of 1861; moderate growth; small foliage; not very promising.

Northern Muscadine.—Layer of 1861; fair growth; generally considered as a very ordinary native grape.

Nancy.—Layer of 1861; good growth, of very slim cane; not very promising.

Ontario.—Layer of 1861; fair growth.

Oporto.—Layer of 1861; a strong growth; gives promise to be a desirable wine grape.

Pennel.—Layer of 1861; a fair growth, but small foliage.

Perkins.—Layer of 1861; good growth; is well spoken of for its fair quality, earliness and nardiness.

Rebecca.—The tenderest and feeblest vines I have. Generally reported to me as too tender for this latitude, but a fine grape, when well grown.

Rogers' Hybrids.—I am convinced that several of these will prove decidedly popular, and worthy

of general cultivation. Nos. 9 and 15, pot vines of 1861, good growth. No. 19, large and handsome layers of 1861; a very vigorous grower—equal to any in my collection. This grape proves to be of good quality, hardy, prolific, and earlier than the Concord. Berries never drop, and keep well. Bunch and berry large and handsome. Several good (amateur) judges in my acquaintance pronounce it a much more desirable grape than the Concord. A small layer of 1859, planted in 1860, gave thirty large layers in 1861, every one of which is growing well in 1862. In two neighbors' gardens, the grape is ripened about one week before the Concord.

Sage.—A well-known "Shaker grape," of rather poor quality, but hardy and vigorous.

Taylor's Bullitt.—Layer of 1861; a very vigorous grower, but canes look tender, and leaf smooth, tender, and badly eaten. Of doubtful hardness.

Union Village.—Pot vine of 1861; good growth; rather too late for this section.

Warren's Seedling.—Layer of 1861; a strong growth; looks well, and is well spoken of.

In my next, I shall take a look at the pear trees.

ELEGY ON "POOR CHARLEY,"

Who, having reached the age of dry bones, (23,) in attempting to kick up his heels, like a colt, broke one of his legs. Not able to commit suicide, as Plato did when he broke his finger, one of the farmers shot him:

Here lies a faithful steed—
A stanch, uncompromising "silver-gray"—
Who ran the race of life with sprightly speed,
Yet never ran—away.
Wild oats he never sowed,
Yet masticated tame ones with much zest;
Cheerfully he bore each light allotted load;
As cheerfully took rest.
Bright were his eyes, yet soft,
And in the main his tail was white and flowing;
And though he never sketched a single draught,
He showed great taste for drawing.
Lithe were his limbs and clean,
Fitted alike for buggy or for dray;
And like Napoleon the Great, I ween,
He had a martial neigh.
Oftt have I watched him grace
His favorite stall, well littered, warm and fair,
With such contentment shining from his face,
And such a stable air;
With here and there a speck
Of roan diversifying his broad back;
And, martyr-like, a halter round his neck.
Which bound him to the rack.
Mors omnibus! at length
The hey-day of his life was damped by death;
So summoning all his late remaining strength,
He drew—his final breath.

T. SPOON.

A HAT AND A HORSE.—If caught in a shower, and you get your hat wet, brush it before it is dry. And so of the horse. When he comes in, wet with perspiration, smooth his hair with a coarse brush—a common broom is better than nothing—in the direction you wish it to lie when he is dry. The animal will feel better, and it will be only

half the trouble to clean him the next time he needs it. Mr. S. will be kind enough to try this on his new "beaver," [made of silk, perhaps cotton, now,] and Mr. W. on his four-year-old dapple grey colt.

For the New England Farmer.

AGRICULTURE IN THE HAWAIIAN ISLANDS.

MAKAWAO, MAUI, HAWAIIAN ISLANDS, }
MAY 16, 1862. }

MY DEAR SIR:—It is quite time to address you after reaching my island home, and getting things somewhat straightened about me. I am sorry that I could not see you again at your office, but though I called twice near the time of my leaving Boston, I could not find you. This was all right, as you were doubtless where duty called. "Duty, stern daughter of the voice of God!" Since I last entered your office in obedience to her call, I left the land of my birth, and am now in the land of my adoption, some 8000 miles, the most direct way from your goodly city. The Lord bless old Boston, the metropolis of New England.

Your readers will not care very much to hear of my voyage to San Francisco and the Islands; rather will they desire to know how I found things on shore and things pertaining to agriculture. To the extent of my ability I will gratify so reasonable a desire.

I arrived in San Francisco, November 6, and remained there about a week. I visited Oakland, and the mission, so called, about a league distant from the city, a place which I saw in 1829 then occupied by the Mexicans, and the most thickly settled of any part of San Francisco. I hoped to make a longer stay, that I might go into the interior a short distance, and see the products of the country; but an opportunity offering for Honolulu, I felt it my duty to leave at once. In visiting the San Francisco markets, I was much disappointed in finding the vegetables, potatoes, turnips, beets, carrots and onions, of so diminutive a size, compared with what I had been told to expect. I supposed that I should find beets of the size of a man's thigh or, perhaps, body, and potatoes like one's head, but I saw no such mammoth vegetables. My impression is that Boston market has as fine a show as San Francisco in the line of vegetables; and in many things, as meats, fish, butter and cheese, Boston is, of course, far before the city of the Pacific. At one thing only was I astonished—the seeing, the hearing of, and tasting the fruits of California. I should hesitate to tell you the measurement of some of the apples and pears which I saw. What would you think of a pear that weighed four pounds and a quarter? Such a pear grew in Oakland last year! The fruit, too, is most excellent. Nothing so good did I taste in 1860, in my travels from Bangor, Maine, to Cincinnati, Ohio, and you know that 1860 was an extraordinary season for fruit. California will be a fruit country, and no mistake.

Let me now tell you of Hawaii. It is now more than two years since I wrote you from Makawao, so I must give you an account of the products of two seasons, 1860 and 1861. The crop of wheat of 1860 at Makawao and vicinity was a very fair one, but the market was very soon supplied, and the surplus was sold at so low a price, that our

Hawaiian farmers were much discouraged. In consequence, much less was sown in 1861. Only some 10,000 bushels were raised, but this was of a superior quality, and sold for one dollar per bushel. More was needed than could be obtained, and seed this spring sold readily for \$1.50 per bushel. A good many oats and some barley and buckwheat were raised, and found a market. In 1861 considerable Indian corn was raised, and it sold for a fair price. The prospect of obtaining a higher price for wheat the present year than had been offered the past two years, stimulated our people to sow more than they had done. In February and March a good deal was sown, and but for the cut worm the crop would have been large. The earliest sown, some of which is nearly ready to be cut, looks very well, the latest sown is nearly destroyed by the worm. This is very discouraging, but there seems to be no help for it. "Long patience" becomes the husbandman.

Of the crop for the present year I will speak again, if spared, after the harvest shall have been gathered. We are now having gentle rains which, may bring forward the late sown wheat so that what remains of it will be stout and of good quality. More than usual Indian corn was raised last year, and our farmers are planting again this spring. As there are but few whaleships remaining, the cultivation of the Irish potato has greatly diminished. Indeed, there is likely to be a great change in the agricultural products of the islands.

The cultivation of sugar cane and the manufacture of sugar are decidedly successful, and this branch of business is rapidly increasing. In my own vicinity there are already three large plantations, with houses and machinery of improved pattern for manufacturing. Several landholders in the vicinity of these plantations are now turning their attention to the raising of cane, so that the prospect of a great increase of the amount of sugar is very fair. At Ulupalakua, some twenty-five miles distant, there is a plantation of several hundreds of acres of cane of promising growth. A mill of superior construction has lately arrived from Boston for this plantation. Wailuku, fifteen miles distant, and Waitepu, a neighboring village, are lands well adapted to sugar cane, and they will both be appropriated ere long to this product. The late King, Kamehameha III., several years ago, and while I resided there, caused a large tract to be planted at Wailuku, and erected a water mill to grind his cane. The experiment proved a failure, however, through the unfaithfulness of the man—a Chinaman, whom he employed as superintendent. Lahaina, which you will recollect as the metropolis of this island, is nearly deserted by whaleships, and there is scarcely anything doing in the shape of trade. But it is probable that all the land that can be spared from kalo, the native staple, will be filled with cane. Much is already planted, and sugar is being manufactured on a small scale. I doubt not that Lahaina will more than recover its importance in consequence of this new business, and I am sure there will be great gain.

Another enterprise has begun to be urged among us, which promises large results. I allude to rice growing. The experiment of growing rice was made some twenty years ago at Wailuku, and succeeded so far as to satisfy all of us that rice could be raised at the islands without any difficulty. But

it was given up because it was doubtful whether it would be as valuable a product as the kalo. I see I'm spinning out my letter too long. Let me pause.

Thine with respect,

J. S. GREEN.

For the New England Farmer.

LITTLE THINGS:

OR A WALK IN MY GARDEN.

Among the little things that most men despise, and do not consider worth their study, is that of

INSECTS INJURIOUS TO VEGETATION.

Insects are among the greatest enemies to the gardener and farmer, and it is gratifying to know that we can, to a certain extent, avoid their depredations as soon as we become familiar with their habits.

Farmers who sow their wheat as early as possible succeed in avoiding, to a great extent, the ravages of the weevil. Many prepare their ground in the fall, so as to harrow it as early as they can in spring. It may now be pretty safely predicted what will be the wheat crop by the time farmers are able to sow it.

The apple tree borer, which but few farmers knew anything about twenty years ago, while they were destroying their orchards, is now known to every good farmer, and his ravages prevented, simply by cutting them out, or what is better, using a straight awl and mallet and by keeping the ground clear around the trunks of the trees, and applying some wash to young orchards in the month of June, made of soda, lime, salt or potash, either of which will prevent them from depositing their eggs.

If we step into the garden we shall there find enough to try our patience. But let us see. I have been overrun with the grub worm, but I have stopped him from eating down my cabbages, simply by tearing a slit in a piece of paper eight inches square and slipping the plant through it, thus making a paper platform around the plant, which must be kept down by a lump of earth or a stone. Care should be taken to have the paper close round the plant, as they will sometimes crawl up through the paper. I have had complete success the present year in saving my cabbage plants.

To save vines from the striped bug, nothing is easier than to place half of a common-sized newspaper over the plant, and hoe a little earth on the edge of the paper. The plants will grow faster in May and June than if exposed to the air, and it is a perfect protection.

The curculio is still a troublesome insect, but I am inclined to think that in fruit-bearing years most northern localities can obtain a good crop by cultivating highly so as to cause as many blossoms to set as possible. It has occurred to me that if a few of the Canada plum tree should be allowed to bear near by, that they would furnish a more desirable treat to the curculio. They bite those much more readily than the ordinary plum. I shall get a good crop this year, though many of them have been destroyed by this pest.

Our gardeners in this vicinity cannot raise onions from the seed on account of the maggot, but they obviate this by planting the potato and top onions, which do not seriously suffer from its ravages. Fine beds may now be seen in most gardens

where they have long been destitute of this esculent.

Thus as we become acquainted with their habits, we may in a measure get rid of the most troublesome insects. There are some which still trouble us, such as the spindle worm in our corn, the currant worm, and the little maggot that eats the roots of cabbage and turnip plants, and a fly that eats off the beet as soon as it appears above ground. A word here in regard to the

BLACK KNOT.

This is not produced by the curculio or any other insect. If it was, I should be overrun with it, whereas it never appears in my garden. It is unquestionably a specific disease, which communicates its poison from tree to tree and which furnishes a welcome nest for certain insects. Gardens where trees are badly crowded together, are usually affected the worst.

LITTLE MISTAKES.

I must stop here to correct a little mistake in my last article. I spoke of the Editor of the *Farmer* as an advocate for August pruning. It should have been *summer* pruning. Things as trivial as that have brought on desolating wars. How important that we should take care of little things!

ST. CATHERINE'S PRUNE.

I noticed a fact that the curculio does not touch this plum in my garden at all. Is the plum worth cultivating? I received the scions from France.

N. T. T.

REMARKS.—We have not raised the St. Catherine. Downing says that "among the fine old varieties of late plums, the St. Catherine is one of the most celebrated. In France it is raised in large quantities, in some districts making the most delicate kind of prunes. It is also much esteemed for preserving, and is of excellent quality for the desert. It bears regularly, and abundantly in this part of the country, [that is, along the Hudson,] and deserves a place in every good garden."

It is not yet well settled whether the *black knot* is occasioned by insects, or is a disease. High authorities are of different opinions.

CLEANING MILK VESSELS.—A correspondent of the *Cincinnati Gazette* truly says, there is no product of the farm that presents so much difference as butter. This arises chiefly from using vessels for holding the milk, and utensils in making the butter, which are soured. In my notice of the effects of having soured troughs in sugar-making, I stated that acidity was fatal to good sugar-making. It is not less so in butter-making. Milk has a peculiar acid very easily formed, which entirely takes away that rich, sweet, fine flavor, belonging to good butter. A very little soured milk or cream on vessels rapidly generates enough acid to take it away. To avoid this great care is requisite. Cleanliness only is not sufficient, in having the vessels well washed, but they must be carefully washed in boiling hot water, and should be boiled in it also. But as the cream is very apt to stick, even in good washing, when the vessels are boiled

in water, *some pearlash or soda should be put in it*, which destroys any acidity that may be about the vessels. They should then be well sunned. I have known some good butter-makers who dispensed with the sunning when soda was used, but both are to be commended.

AGRICULTURAL EXHIBITIONS FOR 1862.

Time of exhibitions by the Agricultural Societies in the State, and the Delegate from the Board of Agriculture to each society.

SOCIETY.	COMMENCES.	DELEGATE.
Essex.....	Sept. 30.....	P. Stedman.
Middlesex.....	Sept. 18.....	Jabez Fisher.
Middlesex South.....	Sept. 23.....	Levi Stockbridge.
Middlesex North.....	Sept. 25.....	Samuel Hartwell.
Worcester.....	Sept. 18.....	Joseph White.
Worcester West.....	Sept. 25.....	D. A. Cleveland.
Worcester North.....	Sept. 30.....	E. W. Bull.
Worcester South.....	Oct. 2.....	M. Stebbins.
Worcester South-East.....	Oct. 14.....	Asa Clement.
Hamp., Franklin and Ham.....	Oct. 2.....	H. H. Peters.
Hampshire.....	Oct. 9.....	John Brooks.
Highland.....	Sept. 11.....	Paoli Lathrop.
Hampden.....	Oct. 7.....	S. B. Plinney.
Hampden East.....	Oct. 14.....	S. H. Bushnell.
Franklin.....	Sept. 25.....	George B. Loring.
Berkshire.....	Oct. 1.....	M. P. Whittier.
Housatonic.....	Oct. 7.....	C. C. Sewall.
Housac Valley.....	Sept. 23.....	C. G. Davis.
Norfolk.....	Sept. 25.....	Henry Chapin.
Bristol.....	Oct. 7.....	Freeman Walker.
Plymouth.....	Oct. 2.....	John B. Moore.
Barnstable.....	Oct. 14.....	J. S. Grennell.
Nantucket.....	Sept. 30.....	Henry Colt.
Martha's Vineyard.....	Oct. 21.....	Matthew Smith.

State Fairs for 1862.

Below we give a list of State Fairs, as far as we have been able to learn the time of holding them. We shall publish this list, with additions and corrections, from time to time, until the season is over.

Vermont.....	Rutland.....	Sept. 9—12.
Canada East.....	Sherbrooke.....	Sept. 17—19.
Kentucky.....	Louisville.....	Sept. 16—19.
Illinois.....	Peoria.....	Sept. 29—Oct. 3.
New York.....	Rochester.....	Sept. 30—Oct. 3.
Ohio.....	Cleveland.....	Sept. 16—19.
Iowa.....	Dubuque.....	Sept. 30—Oct. 3.
Michigan.....	Detroit.....	Sept. 23—26.
Pennsylvania.....	Norristown.....	Sept. 30—Oct. 3.
Indiana.....	Indianapolis.....	Sept. 30—Oct. 3.
New Jersey.....	Newton.....	Sept. 30—Oct. 3.
Connecticut.....	Hartford.....	Oct. 7—10.

DARK ROOMS.—Florence Nightingale, in her *Notes on Nursing*, says: "A dark house is almost always an unhealthy house, always an ill-aired house, always a dirty house. Want of light stops growth, and promotes scrofula, rickets, etc., among the children. People lose their health in a dark house; and if they get ill, they cannot get well again in it. Three out of many 'negligences and ignorances' in managing the health of houses generally, I will here mention as specimens. First, that the female head in charge of any building, does not think it necessary to visit every hole and corner of it every day. How can she expect those who are under her to be more careful to maintain her house in a healthy condition, than she who is in charge of it? Second, that it is not considered essential to air, to sun, and to clean rooms while uninhabited; which is simply ignoring the first elementary notion of sanitary things, and laying the ground ready for all kinds of disease. Third, that the window, and one window, is considered enough to air a room. Don't imagine that if you, who are in charge, don't look to all those things yourself, those under you will be more careful than you are."

EXTRACTS AND REPLIES.

THE BUR-MARIGOLD.

Will the editor please inform me what is the name of the enclosed "posy," and oblige a North Ferrisburgh
SUBSCRIBER.
Aug., 1862.

REMARKS.—The plant enclosed is a common one in Massachusetts, and we believe is the *Bur-Marigold*. It grows on a long, slender stem, and bears a yellow flower, having four or five leaves.

TRANSMISSION OF PROPERTIES.

I wish to call your attention to a piece I find in the *Vermont Chronicle* of May 27, 1862, headed, "Transmission of Properties, Diseases, &c." I would like to see your comments upon it, and its application, not only to the human family, but to the breeding of sheep and other kinds of stock. There are a few thoughts upon my mind that I might like to present at some future time.

Sharon, Vt., Aug., 1862. A. S. PHELPS.

REMARKS.—Send the article along, and your own thoughts, and we will consider them.

A GOOD WASH FOR OUTSIDE BUILDINGS.

Thinking some of your readers may like a good receipt for a wash for buildings or fences, I will give you one which I have used for ten or twelve years. It is almost equal to paint.

Take half a bushel of lime and slake it with boiling water; then add one peck of salt and two pounds of glue dissolved in warm water. Add eight pounds of dry, yellow paint, and two large papers of lamp black, mixed to a paste with alcohol. This makes a beautiful slate color. The color can be varied by adding more or less black to suit the taste.

F. E. BIGELOW.

Concord, Mass., Aug., 1862.

MORTAR FOR BUILDING.

In common practice, the cohesion of mortar is greatly impaired by using too large a portion of sand; it should never exceed two parts by measure to one of lime paste. A cask of lime weighing 280 lbs., made into eight cubic feet of lime paste, should be mixed with sixteen bushels of damp sand. The notion used to be generally entertained that the longer lime was slaked before it was used, the better would be the mortar made of it.

This, however, is not the case with our common fat lime and sand mortars. The sand should be mixed with the slaked lime as soon as the latter becomes cold, and no more water should be employed than will reduce the lime to a thick paste. In preparing mortar, the unslaked lime should be placed on boards and sheltered from the sun and rain; it should be open above and surrounded with some sand. The water necessary to slake lime should be poured upon it with any suitable vessel, and care should be taken to stir the lime so as to bring the water into contact with every portion, when it may be left until all the vapor has passed off.

The sand may now be incorporated with the lime by means of a hoe or shovel; and, if neces-

sary, a little water may be added to produce a homogeneous, consistent paste, when it is ready for use. Sand from the sea-shore should never be employed for making mortar without being first washed with fresh water, because the salt left in such sand is liable to absorb moisture and prevent the mortar becoming hard.

In putting up walls of brick or stone, care should be taken that the stones or bricks be moistened before they come in contact with the mortar. Every brick and stone should be laid in a good bed of mortar, and should receive a blow to fix it firmly. The bricks should not be laid merely as is the common custom, but forced down so as to press the mortar into all the pores and crevices. The superintendent of a building should give his personal attention to the vertical joints in the walls, as the masons frequently neglect to fill them up with mortar.—*Scientific American*.

YOUTH'S DEPARTMENT.

THE DRY STREAM.

"John," said Isaac, to his brother, "do you know that the brook in the sheep pasture has dried up?"

"No; I do not know any such thing."

"It is dry."

"I saw it running not an hour ago."

"It was dry this morning. I was going to cross over on the fence, but there was no water in the bed of the stream above or below the fence. I heard father say the brook never failed."

"I know it has not failed."

"That comes pretty near saying you don't believe what I say."

The brothers went on disputing till they got very angry. At first, one was sure that the other was mistaken. When they became angry, one was sure that the other had asserted an untruth.

Now, the fact was, that both had spoken the truth. When the stream was low, there was a gravel bank by the fence mentioned by Isaac, through which the water percolated without appearing on the surface. John had seen the water flowing as usual in its channel some twenty rods below the fence.

Men often dispute about things in regard to which they really do not differ. They look at the subject from different points of view. Before you decide that a man is wrong because he differs from you, see from what point he views the matter.—*S. S. Times*.

THE KANGAROO AND HIS PUPS.

How many times, on my hunting excursions, have I painfully witnessed the poor doe—when hard pressed by the hounds—hastily pull from her pouch the almost hairless and utterly helpless little Joey (as its offspring is called,) and cast it, whilst at full speed, into a tuft of high grass, or clump of thick fern plants, as the last resource whereby to save herself from the ruthless fangs of her hungry pursuers. And hundreds of times have I seen our magnanimous dogs spring over the Joeys, as if such puny prey were unworthy of their notice, and continue in hot pursuit of the poor, panting mother, who, if so fortunate as to outstrip the hounds, in one hour's time would in-

stinctively return to the spot where she had left her young one, and, on recovering her dear Joey, would hurriedly replace it in its sanctuary, and retire far away, amidst the hills and valleys, for many successive weeks. But Master Joey is frequently captured by the huntsman, reared up by hand, and invested with a bright scarlet collar, to distinguish him from his uncivilized brethren. I brought up one, which formed a great source of mirth and admiration to us all. To witness gentle, unsophisticated Joey turn out of his warm crib at daylight, and join the hounds and half-a-dozen huntsmen, displaying his great agility and delight by clearing dogs, buckets, and iron pots at a single bound, added considerably to the fun and good-humored witticisms which always enliven an early hunting-party, even in the green forests of the antipodes. In the heat of the chase, gentle Joey—arrived at the age of two years—could keep pace with the swiftest of our pack; invariably took his place, leaping in the midst of them, and was always in at the death.—*Thirty-three Years in Tasmania and Victoria.*

LADIES' DEPARTMENT.

MARRIAGE OF DAUGHTERS.

Henry Taylor, in his "Notes from Life," comprises not a little sound as well as practical philosophy upon the incidents leading to marriage, and the relations of mothers thereto. We give it for the benefit of both mothers and daughters:

"If an unreasonable opposition to a daughter's choice be not to prevail, I think that, on the other hand, the parents, if their views of marriage be pure from worldliness, are justified in using a good deal of management—not more than they very often do use, but more than they are wont to avow or than society is wont to countenance—with a view to putting their daughters in the way of such marriages as they can approve. It is the way of the world to give such management an ill name, probably because it is most used by those who abuse it to worldly purposes; and I have heard a mother pique herself on never having taken a single step to get her daughters married, which appeared to me to have been a dereliction of one of the most essential duties of a parent. If the mother be wholly passive, either the daughters must take steps and use management for themselves—which is not desirable—or the happiness and the most important interests of their lives, moral and spiritual, must be the sport of chance, and take a course purely fortuitous; and in many situations, where unsought opportunities of choice do not abound, the result may not improbably be such a love and marriage as the mother and every one else contemplates with astonishment. Some such astonishment I recollect to have expressed on an occasion of the kind to an illustrious poet and philosopher, whose reply I have always borne in mind when other such cases have come under my observation—'We have no reason to be surprised, unless we know what may have been the young lady's opportunities. If Miranda had not fallen in with Ferdinand, she would have been in love with Caliban.'"

ON A WEDDING DAY.

Nine years ago you came to me,

And nestled on my breast,

A soft and winged mystery,

That settled here to rest;

And my heart rocked its babe of bliss

And soothed its child of air

With something 'twixt a song and kiss,

To keep it nestling there.

At first I thought the fairy form

Too spirit-soft and good

To fill my poor, low nest with warm

And wifely womanhood.

But such a cozy peep of home

Did your dear eyes unfold;

And in their deep and dewy gloom

What tales of love were told!

In dreamy curves your beauty drooped,

As tendrils lean to twine,

And very graciously they stooped

To bear their fruit, my vine!

To bear such blessed fruit of love

As tenderly increased

Among the ripe vine-bunches of

Your balmy-breathing breast.

We cannot boast to have bickered not

Since you and I were wed:

We have not lived the smoothest lot,

Nor found the downiest bed!

Time hath not passed o'erhead in stars

And underfoot in flowers,

With wings that slept on fragrant airs

Through all the happy hours.

It is our way, more fate than fault,

Love's cloudy fire to clear;

To find some virtue in the salt

That sparkles in a tear!

Pray God it all come right at last,

Pray God it so befall,

That when our day of life is past

The end may crown it all!

GERALD MASSEY.

DOMESTIC RECEIPTS.

HOW TO MAKE ELDERBERRY WINE.—The berries, when ripe, are picked by the stems, then stripped with the hands, or trimmed with shears. Next they are mashed fine, which can be done by means of a pounder, similar to those used for pounding clothes. Let them remain until the next day, when the juice is pressed out in a cheese press, or any other convenient way. Next, boil the juice twenty minutes; skim it, and add four pounds of sugar to the gallon. When milk-warm add a small piece of bread crust that has been dipped in yeast. Let it stand three days, remove the crust, and the wine is ready for bottling. Age improves it. Some add spices to the liquor when boiled. This is a great favorite with the English.

TO DRESS CUCUMBERS.—Take three good-sized cucumbers, pare them, put them in cool water for an hour, take them out and cut them in the usual way; sprinkle salt upon them and let them be so until an hour before dinner; drain off the salt liquor; put them into a vegetable dish. Take a pint of sour cream, (*not too old*), a good tablespoonful of cider vinegar, a piece of butter the size of a hickory nut; put them on the fire and let the mixture come to a boil; pour it over the cucumbers while hot; set them by in a cool place until dinner. We think it is the only way to eat them. Try it. So says a lady in the *American Farmer*.

OLD-FASHIONED HULLED CORN.—Shell a dozen ears of ripe, dry corn, put it in an iron kettle and cover with cold water; put in the corn a bag of two teacupfuls of fresh wood ashes, and boil until the corn looks yellow and tastes strong of the alkali, then take out the bag and boil the corn in the lye over an hour, then pour off the lye, add fresh water and simmer until the corn swells. If the hulls do not then come off by stirring, turn off the water and rub them off with a towel; add more water, and simmer for three or four hours, often stirring to keep it from burning; when it swells out and becomes soft and white, add salt to liking, and let all the water simmer away. Eat warm or cold, with cream or milk.

PINE-APPLE JELLY.—Take a perfectly ripe and sound pine-apple, cut off the outside, cut in small pieces; bruise them, and to each pound put a teacup of water; put in a preserving kettle over the fire; cover the kettle, and let them boil for twenty minutes; then strain it, and squeeze it through a bit of muslin. For each pound of fruit take a pound of sugar; put a teacup of water to each pound; set it over the fire until it is dissolved; then add the pine-apple juice. For each quart of the syrup clarify an ounce of the best isinglass, and stir it in, let it boil until, by taking some on a plate to cool, you find it a stiff jelly. Secure it in jars.

POTATOES IN HASTE.—A nice dish of potatoes may be made in five minutes, if the water is boiling. Peel and cut some potatoes in slices; pour on them boiling water enough to cover them, and let them boil till tender; skim them out, add butter with flour; let it boil up once, add a little chopped parsley and pepper.

INTERESTING TO THE LADIES.—For once the course of true love has run smoothly. When the Duke of Portland died recently in England, he tried to prevent the marriage of his daughter, Lady Mary Bentinck, with Sir William Topham, by stipulating in his will that her dowry of £32,000 should be withheld in case she disobeyed his commands. The lovers were warmly attached, and Sir William carried the case into court, determined to have the lady, and her portion with her. The court decided that the Duke had no right to encumber the apportionment of money under a marriage settlement with such capricious conditions, and the funds were made over to Lady Mary. Whereupon the lovers were made happy.

If we had not within ourselves the principle of Miss, we could not become blest. The grain of heaven lies in the breast, as the germ of the blossom lies in the shut seed.

THE CATTLE MARKETS FOR AUGUST.

The following is a summary of the reports for the four weeks ending August 21, 1862:

NUMBER AT MARKET.

	<i>Cattle.</i>	<i>Sheep and Lambs.</i>	<i>Shotes and Pigs.</i>	<i>Live Fat Hogs.</i>
July 31.....	1668	8758	270	750
Aug. 7.....	1639	5330	200	150
“ 14.....	2101	5769	350	750
“ 21.....	1649	7064	190	—
	7057	26,971	1010	—

PRICES.

	<i>July 31.</i>	<i>Aug. 7.</i>	<i>Aug. 14.</i>	<i>Aug. 21.</i>
Beef cattle, ψ lb.....	4 $\frac{1}{2}$ @ 6 $\frac{1}{2}$	4 $\frac{1}{2}$ @ 6 $\frac{1}{2}$	4 @ 6 $\frac{1}{2}$	4 @ 6 $\frac{1}{2}$
Sheep and lambs, in lots.....	\$1 $\frac{1}{2}$ @ 3 $\frac{1}{2}$	\$2 @ 3 $\frac{1}{2}$	\$2 $\frac{1}{2}$ @ 3 $\frac{1}{2}$	\$2 $\frac{1}{2}$ @ 3 $\frac{1}{2}$
Swine, stores, wholesale.....	4 $\frac{1}{2}$ @ 6	5 $\frac{1}{2}$ @	4 @ 6 $\frac{1}{2}$	4 $\frac{1}{2}$ @ 5 $\frac{1}{2}$
“ “ retail.....	5 @ 7	5 @ 7	4 @ 6 $\frac{1}{2}$	5 @ 7
Dressed hogs.....	4 $\frac{1}{2}$ @ 5 $\frac{1}{2}$	4 $\frac{1}{2}$ @ 5 $\frac{1}{2}$	5 $\frac{1}{2}$ @	5 $\frac{1}{2}$ @

REMARKS.—Prices for beef cattle showed a downward tendency during the first three weeks of the above term, but there was not, in our opinion, sufficient depreciation to authorize a change of figures, further than to erase, as was done, from the list of prices after the first week, the statement then made that “a few extra Western steers may cost over 6 $\frac{1}{2}$ c.” An addition of nearly 500 to the average supply for several previous weeks was reported for the week ending August 14th. Some three hundred of these arrived at market one day behind hand, and consequently after most of the butchers were well supplied. The result was that the late-comers and such remnants of droves as remained in the yards at the time of their arrival, had to be offered at prices considerably lower than cattle had been selling for, to induce purchasers to add to the stock already on their hands. Low as they were offered, however, they were not all sold, some 60 to 80 head being kept over to the next week, in the hands of the drovers. The cattle at market August 21st, both Northern and Western, were not only less in number, but they were smaller and inferior in quality. About 200 of the Northern cattle were stores, consisting of thin workers, milch cows, and young cattle, among which were some yearlings not as large as calves ought to be. In consequence of this short supply of beeves prices advanced from $\frac{1}{4}$ to $\frac{1}{2}$ c ψ lb.

The market for sheep and lambs has been quite uniform during the last four weeks. The frequent rains have kept the feed good, and a steady improvement has been noticed in the size and quality of the lambs offered for sale. There have been but few old sheep at market, and these have generally been sold with the lambs, within the range of prices quoted above.

The market for milkers may still be reported as rather dull. There have been but few workers brought in as yet, and there has been thus far, this season, but little inquiry for store cattle of any kind.

In consequence of a disease among swine, the trade in store pigs and shotes has become quite small, at Brighton, as will be seen by the number at market for the past month.

NEW HAMPSHIRE STATE AGRICULTURAL FAIR.

—At a recent meeting of the Board of Directors of the N. H. Agricultural Society it was voted inexpedient to hold a State Fair the present Fall. The Directors of the Rockingham County Agricultural Association have passed a similar vote.



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SIMON BROWN, EDITOR.
HENRY F. FRENCH, ASSOCIATE EDITOR.

SUGGESTED BY OCTOBER.

"All through the night
The subtle frost hath plied its mystic art,
And in the day the golden sun hath wrought
True wonders; and the wings of morn and even
Have touched with magic breath the changing leaves,
And now, as wanders the dilating eye
Athwart the varied landscape circling far,
What gorgeousness, what blazonry, what pomp
Of colors, burst upon the ravished sight."

GALLAGHER.



HE sad leaves
are now falling,
sere and with-
ered, from the
branches which
so recently they
adorned; the
wailing wind
sighs through
the forest, and
speaks with
more than Cice-
ronean or De-
mosthenean elo-
quence, of decay
and death. But
nothing is lost
to human happi-
ness, or the ad-

vancement of society, by this change from activity to torpor. Nature suffers no diminution of her powers—no declension of her glorious prerogatives, by hybernating. In the beautiful economy of nature there are no harsh antagonisms, for in every department, every development tends to a common end. Not so in the human mind and character. The alchymy of vice not only trans-
forms,—it destroys.

We have read somewhere of an artist, who, meeting with a child of exquisite loveliness, desired to preserve its features for fear he should never meet such loveliness again. He painted

the face upon canvas and suspended the picture upon the wall of his studio. To him, in his sombre hours, that sweet, gentle face was like an angel of light, filling his soul with the purest aspirations. If ever I find, said he to himself, a perfect contrast to this lovely countenance, I will paint that also, and suspend the two, side by side, as an ideal of heaven and hell.

At length it chanced that, in a distant land, he beheld in a prison the most hideous and revolting object he had ever met—a fierce, haggard fiend, with glaring eyes, and forehead furrowed with the lines of lust and crime. The artist remembered his vow, and painted a picture of the loathsome form to hang beside the lovely portrait that already adorned his studio walls—the picture of the lovely boy. The contrast was perfect, but most revolting; his dream was realized—the antipodes—the two extremes of human character, were vividly before him. But what was the surprise of the painter when he ascertained the history of this disgusting abortion, to find that it was the lovely boy whom he had painted! These pictures—the Angel and the Demon—now hang side by side in a Tuscan gallery. Let us look at the effects of vice on man, and on society, and we shall see changes equally as marked and mournful as that which realized the idea of the painter's dream. We need not travel to a foreign gallery to see illustrated the transforming power of vice upon our physical and moral nature.

—“Of the soul, the body form doth take,
For soul is form, and doth the body make.”

“That brazen-faced, wanton-looking wreck of womanhood, was once a sweet, modest little girl, that blushed at the slightest indelicate allusion. That obese, bloated, brandy-burnt visage, was once a joyous, light-hearted boy. What strange alchymy has wrought this bestial transformation? They have been in the hard battles of appetite, and bear the scars of many campaigns.” When

the dark clouds of winter have passed, the energies of nature, unlike those of the human soul impaired and prostrated by the palsying touch of vice, will revive like the energies of a healthy person strengthened and refreshed by sleep.

Has it ever occurred to our female readers, how important are the duties imposed upon them by their domestic and social relationships? How momentous are the consequences that may ensue to the young of their household from even a partial neglect to satisfy those obligations which they should habitually recognize in practice, and the performance of which ought to constitute the first and sweetest pleasure of their lives. A late writer has observed that, "In the basement cells of inebriety, many youthful forms are sitting for their portraits. The demon artist of lust and intemperance, is gradually moulding them into fiends. The young may steal secretly into those hells of inebriety and lasciviousness, and their friends may not suspect their wayward proclivities. But vice cannot long remain concealed; the soul has no place in which to hide. Soon the foul flame—through some vent or fissure of the body, will find expression. The inmost loves, affinities and desires of the soul, will mould the plastic child into a corresponding likeness. The body is a flesh and blood statue of the spirit, and the countenance the play-ground of the spirit."

The influence of woman is great. Who can estimate, adequately, the aid and comfort they are capable of furnishing their husbands and brothers, simply by manifesting an interest and sympathy in their labors? Nothing sweetens toil like sympathy. The richest reward of the farmer's toil is not bread alone. It is the approbation of those whom he respects and honors—self-respect and the cordial approbation of his fellow-men.

Home education, where there is a union of sentiment between the parents, leaves its impression vividly and strongly stamped upon the soul and heart, and can never be totally obliterated. If the example of the father is in unison with the teachings of the mother, the most determined mind will, in every situation of life, be influenced by it. It haunts us through every stage of its pilgrimage, like a good genius, and ceases only when the mind itself, changing beneath the mystic cloud, ceases to appreciate and respond. During the long evenings of winter, the altar of home should be illuminated with its brightest lights. The mother should labor to form to usefulness and happiness, the minds committed to her charge, and to prepare them by the best moral training possible, for the duties and trials which await them in the trial fields of life.

We have sometimes feared, that among the many innovations of modern refinement, those healthful influences which the young so much need in form-

ing their minds for usefulness, might be too much neglected, and finally become obsolete. The romance of home-life, like every other kind of romance, will, in time, wear out; the heart will be disenchanting, and the merry sports of Christmas and the "Old Oaken Bucket that hung in the Well," as well as the realization of "Love in a Cottage," become a picture of almost fabulous antiquity, and exist only in rural fancy.

The changes occurring everywhere around us, naturally lead to the train of thought in which we have indulged. Spring, with her genial sunshine and showers, will restore the verdure which autumn frosts have now laid low—but the blight occasioned by neglect and vice, may require years of culture and repentance to restore the charms of peace and satisfaction to the blighted soul.

"Solemn, yet beautiful to view,
Mouth of my heart! thou dawnest here,"

to beautify, instruct, and prepare for a winter of rest to the vegetable world. Let us apply this lesson of nature to ourselves, and so live that "our virtues shall blossom in the dust."

OUR TEETH.—They decay. Hence, unseemly mouths, bad breath, imperfect mastication. Everybody regrets it. What is the cause? It is want of cleanliness. A clean tooth never decays. The mouth is a warm place—98 degrees. Particles of meat between the teeth soon decompose. Gums and teeth must suffer.

Cleanliness will preserve the teeth to old age. Use a quill pick, and rinse the mouth after eating. Brush and Castile soap every morning; the brush with pure water on retiring. Bestow this trifling care upon your precious teeth, you will keep them and ruin the dentists. Neglect it, and you will be sorry all your lives. Children forget. Watch them. The first teeth determine the character of the second set. Give them equal care.

Sugar, acids, hot drinks, saleratus are nothing compared with food decomposing between the teeth. Mercury may loosen the teeth, use may wear them out, but keep them clean and they will never decay. This advice is worth more than thousands of dollars to every boy and girl.

Books have been written on this subject. This brief article contains all that is essential.—*N. Y. Independent.*

THINK.—Thought engenders thought. Place one idea upon paper, another will follow, and still another, until you have written a page. You cannot fathom your mind. There is a well of thought there which has no bottom. The more you draw from it, the more clear and fruitful it will be. If you neglect to think yourself, and use other people's thoughts, giving them utterance only, you will never know what you are capable of. At first your ideas may come in lumps—homely and shapeless—but no matter; time and perseverance will arrange and polish them. Learn to think, and you will learn to write; the more you think the better you will be enabled to express your ideas.

For the New England Farmer.

AGRICULTURE IN THE HAWAIIAN ISLANDS.

MARAWAO, MAUI, HAWAIIAN ISLANDS, }
MAY 27, 1862. }

MY DEAR SIR:—A few months since a professional gentleman of Honolulu commenced the planting of rice on some old kalo patches, i.e., patches dug some two or three feet deep, made perfectly level, beaten so hard that they would not leak, and filled with water. In about four months the rice was ripe, cut, threshed, and the paddy weighed. It sold for three cents per pound, and was of a superior quality. It is not certain that the raising of rice will be as profitable for native Hawaiians as the kalo, but foreigners are confident that it will be profitable for them, and numbers of them are going into it. I will keep you apprised of the results so far as I learn what they are.

Cotton, we are confident, will yet do well on the islands. Our climate is adapted to its growth and the only trouble we have hitherto experienced is the insect in the shape of a small fly. Mr. Bailey, of Wailuku, experimented for a season, and he would, perhaps, have held on much longer, but for other labors which demanded his attention. Could we succeed in this business, it would be a rich blessing to Hawaiians, as there are large tracts of land which would answer for cotton, that are now utterly useless. We should also contribute our mite to the pulling King Cotton from the throne of our country, and thus bless others while securing benefit to ourselves.

The Hawaiian Legislature, now in session, will do something, I hope, to encourage agriculture, as all, chiefs and people, plainly see that here alone is the nation's hope. Cattle raising, it has been thought, would be a profitable business, and many portions of the country are full of cattle and sheep. Horses, also, greatly abound. So plentiful are cattle that the best of beef can be purchased for two and a half cents per pound. Pasturage is being ruined by noxious weeds which are fast filling the country, and which can be destroyed only by cultivation. If this is really so, I can see clearly, the hand of God in thus arranging things in reference to our lands. Cultivation teaches industry. Men must toil who plow, and sow and reap. The growing of wheat in my field has greatly increased the industry of my people, whereas the tending of cattle and sheep has taught them to be indolent. I long to have the people all skilled in the business of turning up the soil, and filling the earth with precious seed, or with sugar cane, rice and other things. There would be less grazing land, and, of course, fewer horses and cattle. Horses are a nuisance, and cattle scarcely less so. I mean cattle that are not needed for working or for milk.

The seasons for three or four years have been very dry, so much so that sugar cane has greatly suffered, and many large fields have absolutely dried up and perished. On my return about the middle of December, the whole district was suffering terribly, and one more such season, it was thought, would about destroy our district. But the Great Husbandman remembered us in mercy. Soon it commenced raining, and up to this day we have been greatly refreshed with water from the river of God, and our wheat, sugar cane and gar-

dens have been brought to maturity, and we still have the refreshing shower.

Our volcanoes are quiet of late, but earthquakes are not infrequent. Still they are not very severe. On the whole, with our pleasant climate, fruitful soil, ample productions, both of a temperate and tropical region, where the hand of the diligent is seen, our flowers, fruits and grains of various kinds, we have much reason for gratitude and contentment, especially since peace spreads her wings over the whole land, and every man may sit under his own vine and fig tree, having none to make afraid. God mercifully grant that it may speedily be thus in our own highly favored land, that you may have peace with righteousness.

I must tell you of a new product, or article of commerce, recently brought into notice and repute among us. It is a fungus, an excrescence gathered from fallen trees in the forests of Hawaii and Maui. It protrudes, chiefly, from the Kukui, or candle tree, (*aleurites tribola*), which is cut down for the purpose of obtaining the fungus. Several pounds may be gathered from a good-sized tree at one time, and frequent crops are garnered. After being dried, the article sells at my place for seven cents per pound. At Honolulu it is worth eight, and sometimes nine cents, and at China, whither it is sent, it brings fourteen cents, perhaps more. A great deal of it is gathered in my neighborhood, and large quantities, I hear, on Hawaii. It is light work, can be gathered by women and children. The natives call it pepeiao laau tree ear. It is used in China for soups, and answers the purpose of Iceland moss. It helps the people just now, as money is very scarce, but as the tree must be cut down ere the fungus grows, much timber will be destroyed, and the country impoverished. It is produced from some other trees, but chiefly from this one, the kukui or candle tree. This tree grows large, and is sometimes sawn into boards, and will become valuable for finishing inside work, for when protected from the weather and well painted it is nearly as valuable as your basswood. The nut, also, produces a tolerable oil for light, and the nut burns freely, and was formerly the poor man's candle. I shall be sorry to see the tree destroyed. The greatest loss will be that we shall have less frequent rains, and thus lose our crops. If spared, I will write you again after our harvest, and will tell you of the progress of rice-growing, of cotton, if any, and of the amount of fungus gathered by our Hawaiian people. In the meantime, let us pray for the speedy fulfilment of the glowing prediction found in Isaiah 2:4.

Yours, with much respect, J. S. GREEN.

KEEPING ORCHARDS CULTIVATED.—The "*Gardener's Monthly*," an excellent journal, published in Philadelphia, THOMAS MEEHAN, Editor, contained an article a few weeks since, the leading idea of which was, "that orchards are more successful through a series of years laid down in grass and annually top-dressed, than when cultivated and cropped." The *Country Gentleman*, and some other papers, dissent from the doctrine, and urge cultivation. The true course, it seems to us, lies between the two extremes. We have

never known an orchard to flourish that was continually in grass, no matter what the other circumstances were. Perhaps excessive top-dressing might make it thrifty,—we have never tried it,—but it would certainly greatly promote the growth of the grass. On the other hand, orchard land continually cultivated for many years, and annually manured, will so force the trees as to make them tender and liable to disease, and produce such a surplus of wood as to prevent their fruiting.

For the New England Farmer.

HORTICULTURAL NOTES.

D. Waldo Lincoln's Garden, Worcester.—Its Ornamental and Fruit Trees—Fire Blight—Aspect of Worcester.

In a visit to Worcester, lately, I had the pleasure of examining the garden of D. WALDO LINCOLN, Esq. It has been planted from fifteen to twenty years, and comprises most everything of interest in the fruit and ornamental tree departments, with the exception of apples, of which he has but a comparatively small number. Its area is about 15 acres, and is tastefully divided into lawn, pear orchard (and smaller fruits,) and sites for a cold grapery, two houses and a stable. With the out-door culture of grapes he is not much encouraged, as the frosts are earlier and more severe in his locality than in the vicinity of Boston. The highway or northern boundary of his enclosure has a beautiful and thrifty belt of evergreens—pines, Norway spruce, &c.,—15 to 20 feet high, and the pear orchard is still further screened from the north wind by an internal or special belting of the same, and that which lines the avenue leading to the house also answers the same purpose. These lofty hedges are elegant in summer, and useful and beautiful in the winter. The matter of evergreens, in fact, can hardly be overdone. Some question has been raised whether the Norway spruce would bear the shears and thicken up well in the character of a hedge; but it must be set at rest, for Mr. Lincoln has a thick and very handsomely trimmed hedge of these evergreens about 12 feet high. He has also a large collection of shrubbery and ornamental trees in general, embracing many rare specimens.

The number and variety of the proprietor's pears are extensive, and most of the trees are thrifty and in bearing order, showing at present an excellent crop. Particularly noticed were several heavily-laden Rostiezer trees, five or six inches in diameter. This excellent variety is a rampant grower, throwing out branches like a rocket; but age gives the tree a tolerably well-balanced and compact head. His Flemish Beauties were also very attractive, with their large, brown fruit, free from cracks, struggling to hold up their branches. The Fulton Pear was also noticed; and although the trees were not so attractive as some others, Mr. L. regards it as one of the best—superior to the Buffum, another small, native, hardy fruit. Very good specimens of the Beurre Clairgeau, and also of the Maria Louise, were seen. The latter were on large standards, and the proprietor regards the variety as one of the best. He has also many of the new sorts of pears, not yet in bearing.

But it was painful to notice the havoc which the

fire blight was making among Mr. Lincoln's pear trees—many large branches of medium-sized trees being black with it. It would seem that we have no remedy for this evil, although it is recommended that the affected parts be immediately cut away, some inches below the disease, and burnt. For appearance, at least, this should be done.

Fire blight is supposed to be a disease of the circulation, caused by hot and damp weather. And it is thought that trees of rapid growth, or of a plethoric habit, are more liable than others to the attack. Hence it has been recommended to plant in soil of moderate richness, or to avoid high culture. But rather than be annoyed by slow growth most cultivators would take the risk of the blight, even if it might kill some of their trees outright.

But I am inclined to question the theory of "plethora," the superabundance of sap, or of rapid growth. From my own observation, newly-grafted trees, throwing out a large head of very luxuriant and sappy wood, are no more liable (if so much so,) than large and matured trees. If such were the fact, I have several trees that are miracles of escape. Indeed, in this region, I have not noticed the blight. Whether east winds or the spray of the ocean have any favorable influence, may be worthy of inquiry.

Taking a broad view of the laws of nature, however, disease and decay are the normal condition of vegetation, as well as of men; and hence we shall be very likely to be foiled in the preservation of all of our trees—whatever our skill—and taught to submit stoically to necessity.

Worcester is a beautiful inland city, noted for its thrift and cleanliness, and conspicuous for its many handsome residences, with their tasty enclosures of flowers, fruit and shrubbery. It also has a large share of handsome public buildings, and much attention is here given to education. Several railroads terminate or form connections here, also—the well-conducted and well-paying "Boston and Worcester" undoubtedly adding as much as (if not more than) any other to its prosperity.

D. W. L.

West Medford, Aug., 1862.

THE NATURAL WONDERS OF KENTUCKY.—The geological formation of the country is singular. Ponds, with no visible inlet or outlet are very frequent. Holes in the ground, called "sink holes," are very common, and some of these lead to the great caves which abound in this region. Boys pick up load-stone from the ground at most any point. Surveyors are often troubled from this cause. "Sink holes" extend into the earth from ten to three hundred feet, with sometimes a spring or small stream at the bottom. Two of these near Munfordsville excite a good deal of curiosity. One, on an eminence called the Frenchman's Knob, has been descended two hundred and seventy-five feet, without discovering any indications of a bottom. Another, near the town, is some seventy-five feet in diameter at the top, inclines like a funnel to the depth of thirty feet. At this point is an aperture twelve feet in diameter, leading to unknown depths below. A stone or rock cast in, returns no sound indicative of having found bottom. Near the same place is a spring that rises twelve inches at noon, every day, with as great regularity as the sun passes the zenith.

FLOWERS AND FARMING.

In our late ramble into the Western portion of the State, of which a brief account was given in the last week's *Farmer*, we frequently noticed an evidence of taste and refinement among the people in the *cultivation of flowers*. We were often pleasantly surprised to find so much attention given to a matter that *did not* promise to place cash directly in the pocket. The love of flowers, and the cultivation of them, is not only an evidence of taste and refinement, but an evidence that a true sentiment is in the heart, that a love for the beautiful has dawned there, and that a desire for progress and the possession of a general intelligence has been awakened in the mind. One would scarcely love flowers, merely because they look beautifully. He who could go no farther than this, would scarcely have perception sufficient to know that they were beautiful! No. There is a deeper and holier sentiment underlying the love of flowers. It is, that attention to them elevates and purifies the mind, softens asperities, and gives the dusty walks of life many a charm and grace that cannot be found where they are lacking. They have a gentle and refining influence upon children, tending, somehow, to polish their manners and inspire them with noble views of life. "It is a law of our being that we become attached to those subjects upon which we have bestowed labor, and over which we have expended care. We love the trees our own hands have planted, the vines we have cultivated and trailed over our doorways, and over the trellis our own hands have constructed, and our attachment becomes very strong."

All along our way, for more than a hundred miles through a broken and rough country, we passed the most unpretending dwellings, graced with a variety of seasonable and beautiful flowers. Sometimes the dahlia was peeping through the palings of the front yard fence, or some aspiring member of this family looked gaily over it as we passed along. The showy phloxes, with their bright faces, spread themselves in profusion and glistened in the sunshine which gladdened them, while the less pretentious nasturtiums of various colors kept nearer the ground, and opened a flower wherever a stream of sunshine could find its way in. So on the gate posts, in flower pots, or even in rude wooden vessels set there, trailing plants were growing, hiding blemishes in the wood work, and making the dwelling a thousand times more attractive than it could be without them.

But this is not all. Where there were flowers we thought we saw more order about the buildings; an air of tidiness, thrift and comfort, and better farming generally. Was it so, or was it fancy! At any rate, our way was made pleasant by the flowers, and when we entered the dwellings

of those who cultivated and cared for them, we found their inmates intelligent, hospitable, and not unfrequently imaginative and poetical. Strange as it may seem to some, these are two qualities greatly needed on the farm, and their growth there would tend to keep a thousand sons and daughters from deserting the old homestead, and a soil that is capable and willing to yield a larger percentage of profit than is usually realized in most other departments of industry.

"No man can cultivate a love for the flowers of the field, breathe their fragrance, and admire their beauty, without being the subject of that softening influence necessary in forming a perfect and symmetrical character. The refinement thus secured does not at all diminish his mental vigor and strength, but renders them more attractive, and is essential to the perfect development."

CUTTING TIMBER AND WOOD.

The durability of timber, all admit, is more or less influenced by the time of cutting, but all are not so well agreed what is the best time. Every farmer must have observed that chestnut rails in his fences, in some instances, remain entirely sound for many years; that there seems but little difference in the durability of the sap, or outer part of the tree, and the heart or inner part. All becomes hard. The bark, in time, comes off, but shows no decay or worm-holes. In other instances, the sap soon becomes rotten and abounds in worms, and the whole of the rail soon perishes.

So of shingles. In some lots the sap will last well, in others, the first shower will show a difference of appearance, and after a few months it will let the water through the roof.

Walnut and beech timber sometimes become worm eaten (powder post,) in a few months. Other specimens will lie with them and remain untouched for years. In this market a load of wood will be offered, beech, birch or maple, with split surfaces and ends bright and free from mildew, corroborating the assurance of the owner that it has been cut but a few months, and that it was piled immediately where it had a fair exposure to the sun and air, and yet when you handle it you find it light, when you saw and split it you find it changed in texture and color, and its elasticity all gone. In the fire it passes away rapidly with but little blaze and but little heat. Other lots of the same species of wood, cut an equal length of time, and seasoned under the same circumstances, and showing no better on the surface, will be found much heavier on handling, unchanged in structure and color and highly elastic as the saw and axe expose fresh surfaces, and giving a bright, lively fire when you burn it, and worth from a quarter to a third, and sometimes a half more than the first lot. These are all familiar instances, and all depend on the season when the trees are cut. If we are correct in ascribing such results to the time of cutting the timber, it is a question of very great importance, "What is the best time?"

We are not very confident of our ability to answer the question, but will make one or two suggestions and leave it for the present, asking for facts from the observation of our readers.

In the first place, it seems in some way connected with the sap in the wood at the time of cutting. We should like to see the results of a series of experiments, showing the difference in amount of sap in the same species of wood of equal age and thrift, at different seasons of the year. We think the least would be found when the tree was in full leaf. We know that wood-land cut over at this time gives but few sprouts, and that if you wish to destroy bushes, this is the time to cut them, while if you wish to remove the timber from a piece of ground and have it grow up again, the winter is the time to do this. The tapping of the maple in early spring shows that there is a large amount of sap wintered in the tree, both body and roots. Let a person cut a green and a dry tree at this season, and he will find, by comparison that there is a vast amount of sap frozen up in the interstices of the green wood. As the leaf is developed, the sap ceases to flow from a wounded place, and when the leaf is perfected, both on the old twigs and those of the present year's growth, and the growth of new wood is completed for the season, there is an exhaustion of activity. Cut the tree and it sends up, if any, a few sickly sprouts. The timber, on the other hand, dries quickly, and we think it more durable. We leave the subject for the present, hoping to hear from others.—DR. STEPHEN REED, *late Editor of the Pittsfield "Culturist."*

CEMENT PIPES.

J. N. Garretson inquires for the best mode of constructing hydraulic cement pipes. There are two distinct modes in practice—one, forming the pipes simply of water lime cement, with a bore through it; and the other, laying small tubular tile surrounded with the cement. In either case the water lime must be of undoubted quality, which has been proved, and the sand clean, coarse and sharp; these must be well mixed dry, and moistened as needed. The easiest mode is to use tile where it can be had, the smaller the better, an inch and a fourth bore would be just the thing. We have used an inch and three-fourths with success. This mode answers well where there is a considerable flow of water, and not much head or pressure at any place. The ditch was cut to a narrow and smooth trough at the bottom; then an inch of freshly prepared cement or mortar spread quickly and solidly along it. The tile was then laid closely end to end, and pressed a little into the mortar. Then with a trowel the sides and top were covered with the mortar about three-fourths of an inch thick. A rope covered with cloth so as to be just large enough to fit the bore, was drawn through it as the work progressed, to wipe out the inside smoothly, and to prevent mortar from protruding through the crack. After drying enough, say a few weeks, the ditch was filled with earth. It has been about two years since this pipe was laid, and it is now as hard as stone, the cement being much harder than the hard burnt tile, and would now bear considerable pressure—the first year it would not. The smaller the tile the less is the danger of bursting under a head of water, the less cement is needed, and the cheaper the construction. A moderate share of skill will make a good pipe in this way.

The other mode consists of laying a mass of cement around a plug or cylindrical piece of wood,

which is drawn along as the work progresses, leaving a bore in the hardened mass. The chief care is to draw the plug gently, and at the right time to prevent any cracking of the cement. The new mode of using India rubber tubes for forming the bore to be kept inflated with air except at the time it is withdrawn, would obviously prevent cracking better than the common mode.—*Country Gentleman.*

For the New England Farmer.

ABOUT NATURAL HISTORY.

MR. EDITOR:—I find in your columns of the date of August 2, an explanation from your correspondent who writes over the signature of "Farmer," for which I return due acknowledgments. It seems that what I mistook for *sneers* was his peculiar method of asking for information, as the same style characterises his second letter. He has apparently been unfortunate in his acquaintance with "*pundits*" who had the bad taste to air their vocabulary, without the requisite learning to define it, while he himself seems to have shown as little judgment when seeking information of a scientific *botanist* as to the *qualities* and *uses* of plants, as he would in going to a tailor for a new set of wagon harness.

The student of natural history who maintains "that a lobster is an insect," stands, by popular consent, among the first of naturalists, and needs not that I should take up the gauntlet in behalf of his theory. "Farmer" cannot have read the papers, when he makes the statement that nothing of a practical nature was learned last year from students of the science, with regard to the army-worm, grain aphid, &c. He must have entirely overlooked the full and accurate description and plain directions for relief given by Dr. Asa Fitch, of New York, in the *Country Gentleman*, and other papers, and published in full in the Ag. Report of that State; the long and elaborate articles of Mr. B. D. Walsh, of Illinois, of Dr. Kirkpatrick, of Ohio, and Mr. A. S. Packard, of the State of Maine. On page 414 of the *N. E. Farmer* for the month of September, 1861, he will find a description of the army-worm and grain-aphid, in the plainest language, together with methods of destroying them, which have not only been tried with the greatest success by farmers themselves, but also corroborated and reiterated by the highest authorities on Economical Entomology in the country. The inquiry, "What birds bring up their broods on caterpillars at the rate of from 50 to 100 a day?" I will answer in as simple language as possible, lest I fall under the terrible displeasure of friend "Farmer," as expressed in the word "*pundit*," and wherever a scientific appellation is made use of, will also give its equivalent in plain English.

The Baltimore Oriole, or Golden Robin, which devours even the hairy caterpillar of the apple tree,—the common robin, which I have myself seen during *one hour* carry to its nest upwards of twenty caterpillars of the *Bibio albipennis*, or stout-built, white-winged gnat,—one of the most injurious insects to our grass crops; five caterpillars of the *Agrotis tessellata*, which signifies "the checkered rustic," one of the commonest "cut-worms," and one huge caterpillar of the *ceratonia quadricornis*, which means "the four-horned hawk-moth,

with horns on the shoulders," and which ravages the elm trees in this part of the country. The sparrow has been found by careful observers to destroy more than *three thousand* insects per week, while breeding; including not only caterpillars, but flies, beetles, bugs, and other perfect insects. I made no "offer *gratuitously to teach*" "Farmer," but to *exchange information*, and having answered *his* queries, will be obliged to him in turn first, to inform me what facts he can produce in support of the belief in which he indulges with regard to the injury caused by the woodpecker, and second, to favor me with his name and address, unless there is some important reason for concealment. FRANCIS G. SANBORN.

Andover, August, 1862.

GYMNASTICS AS A MEANS OF PHYSICAL HEALTH.

The following remarks are taken from Dr. Dio Lewis' book, "The New Gymnastics," just published. They form the preface to a German work on Dumb Bell Exercises, which Dr. Lewis has incorporated in his volume. The exercises referred to are all to be found in "The New Gymnastics:"

Man's physical integrity must ever depend upon his fidelity to nature. Through the deteriorating influences of civilization, he has departed far from nature. If he would restore his life-energy, he must, like the prodigal son, return.

Health is the most precious of earthly possessions. He who has it, has all things; he who lacks it, has nothing. Men seek with vehement earnestness, external things. How few recognize the value of health. Men seem, to care as little for their bodies as the snail for its shell. The world is full of misery. Physical deformity and suffering are increasing with fearful rapidity. Thank God, the great physiological revolution which is to restore man to his pristine condition, is inaugurated.

As in the prosecution of all other reforms, we are met on every hand by prejudice. We are told that man was not designed to enjoy uninterrupted health; that in this life, he must be the victim of disease and suffering; that nature will give all needed superintendence to the body. True, they say, it is possible to ward off danger, but quite chimerical to undertake the prevention of disease by a development of the powers within. Hufeland took this view of the subject. But the physiological reformer of the present hour affirms that the physical organism is susceptible of indefinite improvement; that it can be made by certain hygienic processes so vigorous and resistant, that amid diseases and dangers it may pass through the fire unscathed.

How shall such invigoration of our bodies be secured? So far as the answer can be given in one word, it is, gymnastics. In the animal body, exercise is the principal law of development. By gymnastics, we mean system of exercises which the greatest wisdom and largest experience have devised, as best adapted to the complete development of the physical man. Ideler was the first to comprehend the principle of gymnastics, and their application to the training of the body. He saw their infinite worth in the education of youth; in

the preservation of the health of adults; and in the cure of many diseases.

Gymnastics are valuable to all persons, but especially to clerks, students, sedentary artisans, and still more particularly, to those, who in addition to sedentary habits, perform exhaustive intellectual labor. With the latter class, suffering from indigestion and nervous irritability, nothing but a wise system of gymnastic training can prevent the early failure of the powers of life. We believe that to such persons this little work will come as a most welcome friend. We believe that it may assist them in returning to health and nature. Do not, friends, we implore you, refuse its kind offices by such pleas as "want of time," the "great difficulty of the feats," "age," "rigidity of limbs," or "want of strength;" for if these excuses are well founded in your case, the exercises described in this little work will prove to you of great value.

The reader will find descriptions and illustrations of a large number of the most valuable exercises with dumb bells. The descriptions are so simple that there will be no difficulty in understanding them.

It is hoped that in this little book many persons will find a simple means, through which they may secure a full use of all their powers. May they find it a source of health and happiness.

THE BED OF THE SEA.

Take up a pinch of the soil over which lies two thousand five hundred fathoms of sea water, submit it to a microscope, and behold, though it looks and feels like fine clay, it does not contain a particle of sand, earth or gravel. Every atom under the lens tells of life and living things. The bed of the Atlantic is strewn with the bones and shells of the myriads of creatures inhabiting its waters—creatures so numerous that figures fail to convey an idea, or the mind to embrace their vast profusion. The navigator traversing the blue sea sails for days in a fleet ship through waters so thickly covered with small pulpy sea-nettles, or medusæ, that it looks to him like a "countless meadow in yellow leaf." The savant, following on his trail, places a single one of the sea-blubbers under a lens, and in one of its nine stomachs finds seventy thousand flinty shells of microscopic diatomacæ, one of the many animalculæ of the sea. Thus each creature in these thousand square leagues of medusæ was sucking from the millions of these diminutive creatures, and ejecting their shells, to fall, in a gentle yet perpetual shower, down to the bed of the ocean, and there, in time, form strata of silicious and chalky matter for future geologists to ponder over. And, remember, that upon all these medusæ prey legions of bigger creatures, and that into these helpless colonies sails the huge whale with cavernous mouth, and gulps down as many of them at every feast as they do of the minute diatomacæ.

FINE WHEAT.—We have upon our desk as handsome a specimen of wheat as one could ask to see. It grew upon the farm of Mr. S. M. BAKER, of Hillsboro' Bridge, N. H. We hope Mr. Baker will send us some account of the wheat itself, and of his mode of culture.

For the New England Farmer.

WINTER WHEAT.

MR. EDITOR:—Your correspondent from Leominster inquires about the expediency of plowing in winter grain, and refers to the experience of a brother farmer in plowing in wheat about the last of August or the first of September. I would unhesitatingly advise him to be guided by the experience of his brother farmer.

There is much more spring wheat cultivated in this part of the State, than there is of winter wheat. The reason assigned is, that wheat sowed in the fall, is apt to be winter-killed. But observation has long since convinced me that if wheat is sowed early, say from the 20th of August to the 10th of September, so that it may form a good root, and the root is well covered in the soil, that the crop is quite as sure as spring wheat. If it is sowed early and makes a large growth of leaf, the leaves are a great protection. In order to get this growth of leaves, the ground must be mellow and well manured. The best way to put in winter wheat is with a light horse plow, guaged so as to run at a uniform depth, not less than three inches, and not over four. This should be followed by a roller. At the season referred to, the land is worked easier than in the spring, and farm work is less urgent just at that time, between haying and harvesting. The grain starts immediately, and will grow more in one week then, than in two weeks in April and the first half of May. Cattle should not be allowed to run upon it in October or November, for the reason that I have already alluded to, that the leaves are wanted as a matting to protect the crowns of the plants. Another objection is, that the cattle tread the ground and leave it uneven.

Another reason for the culture of winter wheat may perhaps be suggested by the prevalence of the wheat aphid during the present season. Winter wheat makes its growth and matures earlier than spring wheat, and will probably be less injured by this insect than spring wheat. Experience and further observation must determine this point.

Winter wheat will, I think, be found less exhausting to the soil than spring wheat. The reason of this is probably that the leaves made in the autumn, decay in the spring, and constitute a top-dressing of considerable value. I have for three years been urging upon our farmers the expediency of cultivating winter wheat, and of putting it in with the plow, the latter part of August, and I am glad to see that practical men are being led by experience to the same conclusion.

Concord, Aug. 21, 1862. J. REYNOLDS.

PRESERVING DAHLIA TUBERS.—A correspondent of the *Journal of Horticulture and Cottage Gardener*, writes as follows: "May I be permitted to offer a simple suggestion relative to the preservation of Dahlia roots during winter? Though carefully dried before storing away in the autumn, I used continually to lose them by the rotting of the crown, till at length the idea one day occurred to me that the mischief was occasioned through the decay of the long stalk left attached to the tubers; this becoming partially charged with fluid, kept the crown constantly wet. My remedy has been not to leave more than four inches of stalk; from this to scrape the whole of the outer covering

or bark, and at the base to make a small opening which permits any watery deposit to escape. The result has been that I have preserved the whole of my tubers, while experienced gardeners around me have complained of loss, notwithstanding that every precaution from damp or frost had been taken."

EXPLANATION OF TERMS USED IN DESCRIBING FRUITS.

As the season is at hand when fruit is ripening, and the various kinds of apples and pears, especially, are under discussion, we give below, from Coles' Fruit Book, some explanation of the terms used in describing them. They will be found to be plain and easily understood by all who will give them a very little attention.

Fruits are generally described in familiar language; a few technical terms, only, are used.

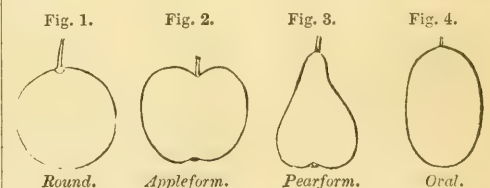
The position of fruits, as represented by engravings, is stem upward, as it usually hangs on the tree; yet, in description, the stem end is called the base or bottom, as it is next to the branch or tree, and the blossom end is called the top, summit, crown, apex, or eye.

Sizes are expressed by comparative terms; as, extremely large—very large—large—rather, or tolerably large—large medial—medial—small medial—rather small—small—very small—extremely small. These form a graduation of sizes.

Forms of fruit are multifarious, varying, all the way, from one extreme to another. The following figures and remarks will aid the inexperienced.

Round.—This simple form is most common to fruits, and other substances. It is the basis on which other forms are calculated. Figure 1. Black Hamburgh Grape. Slight deviations are *Roundish*, as the peach.

Appleform is the most common modification of the circle. The base or stem end is the larger. Fig. 2. Baldwin Apple.



Pearform, or *Pyriform*, is the reverse of appleform, as the base is the smaller. Fig. 3. Andrews Pear. Pears generally taper more to the small end than apples.

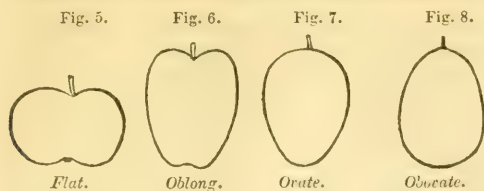
All other Forms are modifications of these three leading forms.

Oval, the circle modified or elongated lengthwise. Fig. 4. Smith's Orleans Plum; White Muscat Grape.

Flat, the circle elongated crosswise. Fig. 5. Briggs' Auburn Apple, Rambo Apple.

Oblong, the height greater than the diameter. Fig. 6. Porter Apple; Coe's Golden Drop Plum; Portugal Quince.

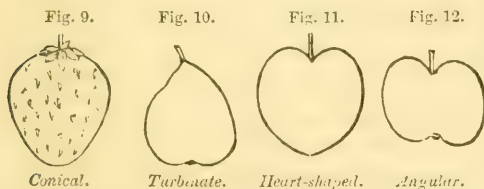
Ovate, the form of an egg; the base the larger end. Fig. 7. Williams Apple; High Bush Blackberry is long-ovate.



Obovate, ovate form reversed. Fig. 8. Osborn's Summer Pear; Blue Imperatrice Plum; Cranberry.

Conical, tapering much, and straightly, or nearly so, to the top or calyx. Fig. 9. Burr's New Pine Strawberry.

Turbinate, top-shaped. Fig. 10. Dearborn's Seedling Pear.



Heart-shaped, shape of a heart. A form peculiar to cherries. Fig. 11. Elton Cherry.

Angular, elongated diagonally, one side the lower, the other the higher. Fig. 12. Newton Pippin.

A combination or modification of these forms, is expressed by a combination of these and various other terms; as, roundish-flat, flattish-round, flattish-conical, roundish-conical, oblong-conical, roundish-ovate, oblong-ovate, obtuse-pyriform, acute-pyriform, obovate-pyriform, turbinate-pyriform, roundish-pyriform, flattish-roundish-conical, roundish-acute-pyriform, obtuse-heart-shaped, acute-heart-shaped, roundish-heart-shaped, &c.

Calville-shaped, prominently ribbed and irregular.

Ribbed, having moderate protuberances on the sides.

Undulating or Waved, having very gentle swellings on the sides, or in the cavity or basin.

Colors of fruit are described in terms so familiar, that they need no explanation. They should represent the fruit as it appears when ripe or perfect for use.

The STEM is also called stalk, and the hollow in which it is set is called

CAVITY, which is of various forms.

The CALYX is the remains of the blossoms, and the parts of it are called segments. The calyx is generally in a depression or

BASIN, which is of various shapes, and is smooth, waved, furrowed, plaited, or notched.

SUTURE is a hollow or furrow on stone fruit, extending lengthwise round, nearly round, mostly round, half round, or partially round it. It is peculiar to peaches and plums.

MR. A. SAUL, OF NEWBURG.—We are sorry to learn of the death of this well-known horticulturist. As partner in the firm of A. J. Downing & Co., Mr. Saul became widely known; and as the active man in the nursery branch, caused the Newburg Nurseries to reach a distinguished position

in the trade. When the firm was dissolved by the withdrawal of Mr. Downing, Mr. Saul occupied the position of head of the firm, and we believe nearly entire proprietor, with varying success through these disastrous times, until the 25th of June, the day of his sudden death. He had a slight fall, on his grounds, a few days previous, but it was deemed nothing serious. He was, however, injured internally, and died from this cause.

For the New England Farmer.

RETROSPECTIVE NOTES.

"AGRICULTURE IN OUR COMMON SCHOOLS.—On page 352 of current volume of this journal, (monthly edition,) and in the weekly issue of July 12th, the reader may find an article with the above heading, from the pen of JOHN GOLDSBURY, a gentleman who usually writes instructively, and with admirable good judgment. Upon the present occasion, however, his good judgment seems to have been asleep, as not a few readers, it may be presumed, will be inclined to think, as well as the writer of this, after a careful and candid perusal of the following strictures.

Mr. Goldsbury presents for the consideration of readers of this journal the two following questions, viz: "Ought agriculture to be taught in our common schools? In their present state and condition, can it be successfully taught there, without doing more harm than good?" He then proceeds to offer a few reasons why, as he thinks, agriculture ought not to be introduced, as a study, into our common schools.

The first objection offered by Mr. G., though not formally stated as such, is the remark that our common schools were established for the purpose of teaching reading, writing, spelling and defining of words, grammar, or the use and power of language, arithmetic and geography; and that the design of the education of children in common schools is, not to fit them for any particular calling, whether it be that of a farmer, a merchant, a mechanic, or a manufacturer, but, by a thorough training and drilling in the above studies, to prepare them for any occupation or pursuit. Now this preliminary remark, or first objection to the introduction of agriculture as a study into our common schools, is itself objectionable, as being nothing more than an erroneous assumption, if Mr. G. means to imply that common schools have been established, or are maintained for the purpose of teaching *only* and *solely* the particular branches of study which he has specified. It is true, indeed, and "pity 'tis, 'tis true," that the particular branches of learning named by Mr. G. form, generally, nearly the entire list of studies pursued in many, perhaps most of our common schools; but as no one will be daring enough to assert that the enlightened legislators of any State ever established schools, or that intelligent parents ever maintained schools, in which children were, *by any authority whatever*, to be limited to such a small and circumscribed range of studies, then it still remains nothing else than an erroneous assumption that our common schools were established for the purpose of teaching *only* the particular branches named, or any similar limited range of studies; and furthermore, the objection, based upon this mere assumption, to the effect

that agriculture ought *not* to be introduced, as a study, into our common schools, must be "null and void, and of no force whatever."

The true view in relation to this question of the purpose for which common schools have been established, and are still maintained, seems to be this—that enlightened legislators established them, and intelligent parents and educationists maintain them, in order that the children of the State—each young and rising generation—might have an opportunity of acquiring all the knowledge, and of being trained in all the habits of correct and vigorous thinking or judging, which might in any way, prepare them to fulfil well and worthily all the duties and offices which they might be called upon to perform, as individuals, citizens, and members of society generally, in after life. Many or most schools may, indeed, come short of this high and comprehensive design, but nevertheless, this is the end and object of their creation; and consequently every study may, with perfect propriety, be introduced into a common school, which has any tendency or power, by its increasing knowledge or invigorating mind, to fit and prepare the young for the worthy discharge of the duties, offices, responsibilities and transactions or business of adult life. It is a maxim generally acknowledged as true, and of authority, that children should learn, when young, what will enable them to execute well what they will have to do when men and women. And as a knowledge of soils, manures, the growth of vegetables and other things embraced in agriculture, must be useful to almost all, there seems to be no reason why this should not be studied in schools, which would not as obviously exclude a good many other studies which are now among the customary studies of the best schools. All men and women have gardens of some kind, if no more, and would not a knowledge of this and other branches of agriculture be of far more practical value in adult life, than a knowledge of botany, chemistry, astronomy, algebra, geometry, trigonometry, and some other branches of learning generally pursued in schools?

As it might be too great a tax upon the patience of the readers of this journal to take up time and space to review and refute in detail all the considerations used by Mr. G. to enforce his objections to the introduction of agriculture, as a study, into our common schools, I will name, at present, only one of the several things which might be urged in reply to the statements made by him in the article under notice. There is, then, one thing implied or taken for granted in *all* of the objections urged by Mr. G., which, as it is an erroneous supposition, vitiates the whole of his rather surprising plea. This mistake, running throughout the remarks of Mr. G., is this—that if agriculture is to be introduced as a study into our schools, it must be a study obligatory upon *all* who attend these schools, or, in other words, a compulsory, and not, like botany, chemistry, algebra, &c., a voluntary or elective study, which only those are to engage in who may wish to do so, or who may be desired to do so by their parents or guardians. Almost all the studies attended to in our schools, are elective or voluntary, not compulsory, and why Mr. G. should have taken up the supposition that agriculture, if introduced at all, is to be a study obligatory on all, seems difficult to be accounted for. It might, indeed, be easily accounted for in

a lawyer who was employed to do his utmost in making out a case, or in one who was so thoroughly prejudiced and one-sided as to be utterly blinded to the truth and the reality of things, but we cannot allow ourselves to place Mr. G. in either of these positions. But however this supposition came to be entertained, it runs through *all* that Mr. G. has written on the subject, and renders *all* his objections of little, or rather of no force whatever. The question of the *expediency* of introducing agriculture as a study in schools is, therefore, now open for discussion. Who will speak in favor of it?

MORE ANON.

EXTRACTS AND REPLIES.

LICE ON FOWLS.

I wish to inquire of you where the black sulphur of which you speak in the *Farmer*, as a remedy for lice on poultry, can be purchased? I have tried to obtain it at several different places, but without success. By an early reply you will much oblige your subscriber,
F. F. S.

Needham, Aug., 1862.

REMARKS.—The article which we published was taken, we think, from an English paper. On inquiry we learn that the word "black" should be *lac*, that is, the *milk* of sulphur. It is called *lac sulphur* because it is washed in alcohol, which takes away a large amount of the sulphur odor. See remedies for lice on fowls in the article below.

I wish to inquire through your valuable paper,

1. What is a safe cure for lice on fowls?
2. Are you acquainted with a book called "The Manual of Agriculture," and if so, would you advise one with a small farm to buy it?
3. What is the best food, except honey, to feed bees with, and also, what is the best way to feed them?

By answering the above you will oblige a new subscriber.
P.

Beverly, Aug., 1862.

REMARKS.—*Lice on Fowls*.—Keep everything perfectly clean, and keep them in perfect condition so far as feed will do it. Oil the roosts once a month with any soft, clean oil that has no salt in it. Occasionally rub a little under their wings, on the top of their heads, but in very small quantity. Provide plenty of wood ashes for them to roll in.

2. Buy the "Manual of Agriculture," by all means, and become master of all the facts it presents.

3. *Food for Bees*.—Next to our honey, West India is the best. It can be bought for about \$1.50 per gallon. The best way to feed bees is in little troughs directly over their comb—but you cannot do it in common hives. Put straws into a saucer and turn honey into it and set it under the hive, and see that robbers do not come for it. Torrey's Maine State Hive has all the accommodation for feeding bees, without their being visited by neighboring swarms.

THE POTATO ONION.

In a late paper I noticed a communication from South Danvers which spoke of the culture of the potato onion. I am curious to know how extensively this variety is grown; and whether there is any probability of its supplying the want of onions raised from the seed. The writer speaks of its having been grown by Mr. P. L. Osborn and several others, but to what extent it is grown no intimation is given. If anything can be discovered that will restore the onion crop, it will be hailed as a God-send throughout the land.

August 20, 1862.

INQUIRER.

REMARKS.—We join our correspondent in this inquiry, and shall be glad to receive a full account of the culture of the potato onion from Mr. OSBORN, or any other gentleman possessing the facts.

MINERALS IN MUCK.

In draining a swamp, I threw from the ditches a kind of muck, which, after being for a time exposed to the atmosphere, frosted over with a substance which tastes like alum. No vegetation starts upon it. Is it of any value as a fertilizer, and if so, how should it be used?

West Brookfield, Aug., 1862. W. B. STONE.

REMARKS.—We have often cases such as you describe. The muck is strongly impregnated with some mineral substance which is sufficiently powerful when the muck lies in mass to prevent any vegetable growth upon it. It may, however, be very useful when used in small quantities on land unlike itself; but this will depend upon what the substance is. Will you try it, in a small way, on a piece of grass land, this fall? We should be glad to receive a sample of it, if you can send it without trouble. It would not be safe to mingle this muck with barn manures, or to use it extensively until its qualities are ascertained.

MILK FROM THREE AYRSHIRE COWS.

I send you a statement of the milk from three Ayrshire cows, not because the amount is extraordinary, but to elicit information, and thus give your readers an opportunity to compare the yield of milk with that of other breeds.

"Beauty," 8 years old, imported by me when one year old, average weight of milk for seven days, from June 19 to 25, 44 pounds. Calved May 1.

"Bessie," 4 years old, bred by me out of a cow I imported, average weight of milk same time for seven days, 47½ pounds. Yield for one day, 49 61-100 pounds. Calved May 12.

"Tulip," 5 years old, bred by me out of a cow I imported, average weight of milk seven days from June 28 to July 4, 42 pounds. Calved May 31. Total 133½ pounds, the three averaging a trifle over 44½ pounds each per day.

It should be borne in mind that the Ayrshire cow is not large. The only one I ever weighed was "Beauty," whose live weight, two years ago, was 860 pounds. The other two may be something heavier.

L. SWEETSER.

Amherst, Aug. 8, 1862.

THE TOOLS GREAT MEN WORK WITH.

It is not tools that make the workman, but the trained skill and perseverance of the man himself. Indeed it is proverbial that the bad workman never yet had a good tool. Some one asked Opie by what wonderful process he mixed his colors. "I mix them with my brains, sir," was his reply. It is the same with every workman who would excel. Ferguson made marvellous things—such as his wooden clock, that accurately measured the hours—by means of a common penknife, a tool in everybody's hand, but then everybody is not a Ferguson. A pan of water and two thermometers were the tools by which Dr. Black discovered latent heat; and a prism, a lens, and sheet of pasteboard, enabled Newton to unfold the composition of light and the origin of color.

An eminent foreign *savant* once called upon Dr. Wollaston, and requested to be shown over his laboratories, in which science had been enriched by so many important discoveries, when the Doctor took him into a study, and, pointing to an old tea-tray, containing a few watch-glasses, test-papers, a small balance, and a blow-pipe, said: "There is all the laboratory I have."

Stothard learnt the art of combining colors by closely studying butterflies' wings; he would often say that no one knew what he owed to these tiny insects. A burnt stick and a barn door served Wilkie in lieu of pencil and canvas. Bewick first practised drawing on the cottage-walls of his native village, which he covered with his sketches in chalk; and Benjamin West made his first brushes out of the cat's tail.

Ferguson laid himself down in the fields at night in a blanket, and made a map of the heavenly bodies, by means of a thread with small beads on it, stretched between his eye and the stars. Franklin first robbed the thunder-cloud of its lightning by means of a kite made with two cross-sticks and a silk handkerchief.

Watt made his first model of the condensing steam-engine out of an old anatomist's syringe, used to inject the arteries previous to dissection. Gifford worked his first problem in mathematics, when a cobbler's apprentice, upon small scraps of leather, which he beat smooth for the purpose, while Rittenhouse, the astronomer, first calculated eclipses on his plow-handle.—*Smiles' Self-Help*.

THE CHRYSANTHEMUM.—Unusual importance attaches to the cultivation of chrysanthemums, from the facility with which they may be grown in the very heart of large towns, as has been proved by the efforts of Mr. Broome, in the Temple Gardens, where he has grown all the best varieties in a manner which has astonished many who have examined his collection. The flower is of easy culture, and cuttings may be struck almost up to the time of flowering, and nothing is finer than the display of its flowers in October and November, ranging as they do from pure white to a deep orange, from a pale blue to deep red and crimson; but, like the dahlia, the first frost sadly spoils its bloom. When the collection is a choice one, they are best trained against a wall or in beds, where protection can be easily applied. By means of pot culture, which is now extensively used, a splendid show of flowers may be preserved even up to Christmas, with comparatively little trouble.

SKYLARK PREACHING A SERMON.

There is no such thing as a song bird natural to Australia; there are birds who chatter, birds who shriek, but no birds that sing. Well, there was a young man who went out from England as a gold digger, and was lucky enough to make some money, and prudent enough to keep it. He opened a "store"—a kind of rough shop where everything from candles to coffins are sold—at a place called "the Ovens," a celebrated gold field, about 200 miles from Melbourne. Still continuing to prosper, he, like a dutiful son, wrote home to his father and mother to come out to him, and if they possibly could, to bring with them a lark. So a lark was procured, and in due time the old folks and their feathered charge took ship and departed from England. The old man, however, took the voyage so much to heart that he died; but the old woman and the lark landed in sound health, at Melbourne, and were speedily forwarded to Mr. Wilsted's store at the Ovens.

It was on a Tuesday when they arrived, and the next morning the lark was hung outside the tent, and commenced piping up. The effect was electric. Sturdy diggers—big men, with hairy faces, and great brown hands—paused in the midst of their work, and listened reverently. Drunken, brutal diggers left unfinished the blasphemous sentence, and looked bewildered and ashamed. Far and near, the news spread like lightning—"Have you heard the lark?" "Is it true, mate, that there is a real English skylark up at Jack Wilsted's?" So it went on for three days, and then came Sunday morning. Such a sight had not been seen since the first spadeful of the golden earth had been turned! From every quarter—east, west, north and south, from far hills, and from creeks twenty miles away, came a steady concourse of great, rough Englishmen, all brushed and washed as decent as possible. The movement was by no means preconcerted, as was evident from the half-ashamed expression of every man's face. There they were, however, and their errand was to hear the lark! Nor were they disappointed. There, perched in his wood and iron pulpit, was the little minister; and, as though aware of the importance of the task before him, he plumed his crest, and lifting up his voice, sung them a sermon.

It was a wonderful sight to see, that—three or four hundred men; some reclining on the ground; some sitting with their arms on their knees, and their heads on their hands; some leaning against the trees with their eyes closed, so that they might the better fancy themselves at home and in the midst of English corn-fields once more; but sitting, standing, or lying, all were equally quiet and attentive; and when, after an hour's steady preaching, the lark left off, his audience slowly started off, a little low-spirited, perhaps, but on the whole much happier than when they came.—*Beeton's Home Pets.*

LESSONS OF WAR.—A people in earnest, smarting with the wounds of war, and the deeper inflictions of treachery, is abroad seeking after a country. It has been repeating with annual congratulations for eighty years the self-evident truths of the document which declared its independence; now it discovers that more evidence of it is need-

ed than successful training and building can bring, and it sends it forth afresh, with half a million of glittering specialties to enforce its doctrines, while trade, and speculation, and all the ambitions of prosperous men, and delicately nurtured lives, and other lives as dearly cherished and nursed to maturity, are sent out with an imperative commission to buy, at all hazards, a real country, to exchange what is precious for the sake of having finally what we dreamed we had before—the most precious of all earthly things, a Commonwealth of God. Yes, our best things go, like wads for guns, to bid our purpose speak more emphatically, as it expresses the overruling inspiration of the hour.—*Atlantic Monthly.*

THE BEST TIME FOR PLANTING
EVERGREEN TREES

IS IN AUGUST AND SEPTEMBER.

Evergreens are always in leaf, and it is therefore important, in planting, to secure a *quick* action of the roots, in order to sustain the foliage. Early in the spring the ground is cold and wet, and the roots cannot take hold; and therefore sharp, drying winds are very likely to exhaust the tree of all its juices before a new supply can be furnished. Late fall planting is still worse—for the roots remain dormant a much longer time, and evaporation from the leaves is going on, to some extent, throughout the winter. In May and June the ground becomes warm—the roots are ready for action—and, consequently, the time is favorable for removal.

But the conditions are even more favorable in August and September. At this season the ground is thoroughly warmed through, and as the nights begin to be cool and dewy, the earth gives, as it were, a gentle bottom heat. It is surprising to find with what readiness and vigor the roots now act—often showing signs of growth within three days after planting. There is this additional advantage over May, that the tree has made all its growth for the season, and early matured its wood, so that it is not in need of such a full flow of sap as when the young growth is starting, or is succulent, and the plant has need of all its energies. During the autumn months, the earth being warmer than the atmosphere, while the wood is simply maturing, not growing, the roots on the contrary are in vigorous action, and will insure sufficient strength to resist the succeeding winter, and also the best possible condition for subsequent growth.

REMARKS.—The above came to us in a printed circular from Mr. W. C. STRONG, Nurseryman at *Nonantum Hill, Brighton, Mass.* We print it for the benefit of those who are desirous of transplanting evergreens this fall. We have been through Mr. Strong's green-houses and grounds, and have had plants from them, and feel entirely safe in saying that he has plants in great variety, and that whatever he states in regard to them may be relied upon. We shall immediately put in practice his suggestions with regard to transplanting evergreens. Mr. Strong is so confident of success in transplanting that he is willing to contract to do so, and *warrant to live.*

INSECTS ON WHEAT.

We have been exceedingly sorry to see wheat fields all around us utterly ruined this season by a little black insect that swarms upon it in indefinite legions. In a field that we frequently visited, they began their depredations during the last half of July, and soon multiplied into such astonishing numbers as to preclude all hope of saving the crop. This insect is not the wheat midge which proves so destructive to the wheat crop in Western New York and in the Western States, but a much smaller, and infinitely more numerous destroyer, and one which baffles all human skill. Indeed, we stand powerless before its invasions, and look on its devastations with mingled feelings of wonder and fear at its terrible power of cutting off the chief staple of human subsistence.

The only remedies we have ever heard suggested, are to sow slaked lime plentifully over the infested grain, or thoroughly coat the seed before sowing it. But this must be a hopeless remedy. The cost of the material, the labor of applying it, and the destruction to the crop in doing so, would probably exceed the value of the crop itself.

These destroyers sometimes infest the wheat in Europe to a great extent, and are called the *Thrips cerealium*. In its larva state, "it is smaller than the wheat maggot, is orange-colored, and is provided with six legs, two antennæ, and a short beak, and is very nimble in its motions," as described by Dr. Harris. It is supposed to suck out the juices of the seed, thus causing it to shrink and become what the English farmers call punbled. It belongs to the order HERMITERA, which means that half of their upper wings resemble a piece of leather, and the other half are membranaceous, that is, having a thin, flexible skin. This order includes the various insects which we call bugs, and locusts, plant-lice, &c.

We regret this partial destruction of the wheat crop in New England, because its tendency will be to prevent its culture another year. Our people have now become interested in it, having succeeded well for several years past, and this partial failure will tend to discourage the good work which has been begun.

We hope, however, that farmers will not fail to sow their usual breadth this fall, and give it a fair trial.

BEE PASTURAGE.—The *Bee Journal* says:—"The rapidity with which bees will build comb, and gather honey, under favorable circumstances, is so extraordinary as to be almost incredible. Mr. Brink says that he has known a strong swarm to fill its hives with comb in seventy-two hours; and that colonies expelled in August, put into empty hives, and transported to the heaths, would fill the hive with new comb, and gather from thirty to forty pounds of honey, in the brief season for work in which they could labor."

FOREST TREES OF AMERICA.

During the recent session of the U. S. Agricultural Society at Washington, Dr. J. G. Cooper, of the Smithsonian Institute, delivered an interesting lecture before the Society, on the Forest Trees of America, illustrating his subject with comparisons with the distribution of European forests:—

The thinning out of timber in the older States has reduced the proportion, and we are fast creeping toward the point when it will be scarce and dear. The western boundary of the timber country is a waving line which runs from the west end of Lake Erie to the Gulf of Mexico at the eastern boundary of Texas, which line exactly corresponds with the general direction of the moist winds from the Gulf of Mexico, northward and eastward. The prairie country is bounded by the 30th and 60th degrees of latitude, and the 92d and 120th meridians. Westward come the plains, rendered sterile by the sweeping dried and hot winds from the Pacific. In the prairie country, and, to some extent, in the desert itself, the margins of streams are wooded, and they alone. Along the Pacific slope a belt of timber extends along mountain ranges, becoming thinner as we go southward.

The forests of America are disappearing, and unless some means of preservation are adopted, wood will become very scarce in our own time. In Russia, forests extend nearly ten degrees further northward than in America. The extent of timber land, compared with arable, is greater here than in Europe. In Russia the proportion is 36 per cent., Austria, 30 6-10, Prussia, 21 8-10, France, 16 6-10; for the whole of Europe the proportion is 26 1-4 per cent., while in the United States and Canada it was as high as 48 4-10. In Europe the proportion was increasing, with us decreasing. The computations do not take any note of mere firewood, but solely of the timber suitable for building, &c. In the United States and Canada, north of latitude 43 degrees to 50 degrees, there is 75 to 90 per cent. of the country wooded. South of latitude 43 degrees to Virginia and Ohio, there is 55 per cent.; add Virginia, Kentucky and Ohio to this district, and we have 58 per cent. wooded. Indiana, with the Southern States, except Texas, gives 68 per cent. The prairie States, with wood only along their streams and rivers, have 30 per cent. of timber land; and west of the prairie there is but 5 per cent. in all.

From the statistics of our last census we discovered that 1,500,000 acres out of 2,000,000 had but 5 per cent. wooded. Assuming that in 1790 all the eastern country was wooded, then it had fallen from 90 per cent. to 47 1-2 per cent., or six per cent. each decade, and if the thing went on at this frightful rate, in 30 years more we would reduce our proportion of timber in the older States to but 30 per cent. In Russia it has been ascertained that a country having 37 per cent. of timber lands was well wooded, 37 to 22 fairly wooded, and below that point poorly wooded.

In 1694 laws were passed in Russia for the protection of timber, and in 1720, trees were first planted by Government, German professors employed, and regular schools opened. It has proved highly profitable to the Government, and the system has been greatly enlarged. Up to 1850 there had been surveyed 24,000,000 acres of timber,

and the proportion of each variety of tree ascertained, 49,500,000 surveyed, but the trees not classified, 5,500,000 trees planted, 30,000 acres drained for tree plantations, and 2000 pounds of seeds sown. The saving by protection from the former waste had been \$3,500,000 in three years. They had learned to plant trees in barren, shifting sands, 4000 acres of this formerly worthless land having been set in trees.

HOGS IN THE APPLE ORCHARD.

Nobody sends such apples to market as my neighbor John Jacobs. He always has apples to sell, and gets the highest price. Folks prefer fair, large apples, and such are always packed in Jacobs' barrels. You might search them with a candle and not find a knotty fruit or a worm hole. Such Rhode Island Greenings and Roxbury Russets I have never met with in the old States. They are as handsome as anything in the virgin soils of the West.

I was going by Jacobs' orchard last summer, and I had the curiosity to call and examine for myself. Says I, "Neighbor, what is there in your soil that makes such smooth, large apples? They are a third bigger than I can get, and my trees look as well as yours."

"The secret is not in the soil," John replied with a twinkle in his eye. "Do you see those grunTERS there? My pork brings me fifty cents a pound—eight in flesh and the balance in fruit. I began to pasture my orchard ten years ago with hogs, and since that time I have had no trouble with wormy fruit. Apples, as a general thing, don't fall from the tree unless something is the matter with them. The apple-worm and curculio lay their eggs in the fruit, and the apples drop early. The pigs devour the apples, and by September every unsound apple is gone, and I have nothing but fair fruit left. The crop of insects for the next year is destroyed by the pigs. They root around under the trees, keep the soil loose, manure the land some, and work over what manure I spread. The apples help the pigs, and the pigs help the apples."

I saw John's secret at once, and have profited by it. I never had so few insects as this spring, and I give the pigs the credit for it. In turning the orchard into a pasture put in pigs—not land-pikes with snouts like levers. You might lose trees as well as insects in that case. But well bred animals with judicious snouts, will root in a subdued and Christian-like manner.—*American Agriculturist*.

A TROUT FACTORY IN CONNECTICUT.—Messrs. Dunham, Kellogg & Ives, of Hartford, have a large trout factory in Glastenbury, Conn., where trout are hatched by artificial means. The number now in the pond is between 40,000 and 50,000 and rapidly increasing. When the stock reaches the number of half a million, they estimate a yield of 58,000 pounds per annum. As they will bring in the market from 25 to 50 cents per pound, this amount would afford a very pleasant net income. The fishes are fed regularly, and they have a man in constant attendance. Their food consists of small fishes and shad spawn in season. Millions of suckers are raised to feed the hungry beauties of the pond.

For the New England Farmer.

"A PAIR OF TWINS."

MR. EDITOR:—I was quite interested in reading a few lines in your last week's *Farmer*, under the above words. Your deserving Vermont correspondent questions the propriety of saying "a pair of twins." So common has been the usage, I presume the question seldom presents itself as to whether it be strictly a correct expression. But let us examine it a little more minutely, and see if the conclusion at which our friend arrives be correct.

"Is it true," asks your correspondent, "that two produced at the same birth constitute a pair of twins?" This, in substance, he answers in the negative. Now the definition of a pair we all understand to be a couple, or two of the same sort; and this, our friend will admit, we have in two twin children. Here, then, is a pair—of what? Why not a pair of twins? They are certainly twins, and there is a pair of them. Our friend may say twin itself implies that there is more than one, and may suggest that if we prefer to use the word pair, we say "a pair of children." But does this really express the idea? No, I think not; we should not know they were twins. On the other hand, if we say simply "twins," that gives us too wide a range, for it may refer to either two or a dozen. Take an assembly, for instance, where we will suppose—which would not be an impossibility—that there were a dozen twin children. Each child according to the lexicographers, may be properly called a twin. Are there, then, in the dozen, six pairs or three? According to your correspondent's reasoning, only three. But I believe the majority of your readers will be of my opinion, that it takes six pairs to make a dozen.

In short, Mr. Editor, I see no more objection to saying "a pair of twins," than "a pair of oxen." Because the thought of one hay-pole suggests another, its mate, is it any reason that we should hesitate to say a pair of hay-poles? P. PAIGE.

South Hampton, N. H., Aug. 12, 1862.

HOW TO MAKE A CEMENT FOR STOVES.—Take fine salt one part, and two parts of fresh, hard wood ashes, mix well together, then take cold water, and mix into a mortar. Apply to the crack either warm or cold, and you will find a cement which will answer all common purposes, and found to be very useful where the stove-pipe joints are not as tight as is desirable.

Still Another.—Take iron filings, and mix to about the consistency of putty for glazing, with white lead and linseed oil. Fill in the joints as securely as possible, while the stove is cold, and let it stand a day or two before using.

KEEPING GRAPES.—The *Gardener's Chronicle* states that Mr. Thomson, of Dalkeith, adopted the following method of keeping grapes, with great success: In cutting the grapes he left the bunches attached to the branches that bore them; sharpened the points of the branches where they had been detached from the parent stem, and ran them a couple of inches into mangel wurzel roots. They were laid on the shelf of the fruit room, and the grapes allowed to hang over the shelf, where they could be cut as required. They kept perfectly plump till the last bunch was consumed.

For the New England Farmer.

BIRDS versus INSECTS.

MR. BROWN:—A few days since I took a leisurely stroll far into the forest, for the express purpose of observing the habits of some of our woodland birds. Though it was mid-August, the day was cool, clear and autumn-like. The woods were extensive, and though the larger trees were chiefly pine, every kind of timber growing in the vicinity abounded there. When I first entered the edge of the wood, a single Wood Pewee and a Scarlet Tanager were the only birds visible, or even hardly within hearing, excepting a bevy of Jays, screaming loudly in the distance. While I was watching the Wood Pewee, as she darted upon passing insects, and anon gave frequent utterances to her plaintive call of *pee-e-wee*, and wondering what might cause the still bright red Tanager (these birds generally moult and change their scarlet dress for one of greenish-yellow early in August,) to call so loudly *chicken, chick, chicken*, and appear so much irritated, a confiding Chickadee alighted low on a sapling near me, and began eying me with the usual inquisitive boldness of his species. He uttered feebly and hesitatingly his wild call-note, *pe-dee*, and was soon joined by his companions. Now, various species of summer Warblers appeared, when on came the throng of noisy Jays, accompanied by a considerable number of Baltimore Orioles, which, at this season, forage extensively in the woods, as well as among the trees of the orchard, a large spotted Woodpecker, several Nuthatches, Vireos and other birds. The whole formed as numerous and musical a party as one often meets in a forest—taking complete possession of the trees, the twigs and small branches of which seemed in constant vibration as they hopped about among them, hunting insects. I sat down and reckoned up fully fifteen species that I had seen in the last ten minutes, some of them represented by a dozen or twenty individuals.

The Chickadee, close by me, I several times saw pulling in pieces caterpillars and inch worms, and eating them by piece-meal; the Jays were feeding their full-grown young with the fruits of their foraging, apparently chiefly caterpillars; the Orioles I saw separate the rolled up leaves on an oak, and draw therefrom and devour the hidden larva, and hammer in pieces large caterpillars preparatory to swallowing; the Nuthatches were running over the stems of the trees, shivering off the loose scales of bark to get at the concealed insects; the Woodpecker was hammering away on a decayed limb for a borer, and the Warblers were seizing insects flying in the air, as well as those that infested the trees. I remained still in my situation, quite unobserved by the birds for a long time; for it was a half hour or more before this numerous party was all past, in their leisurely way of foraging; and at no time during the several hours I remained in the wood, were there no birds visible, but on the contrary, several, and many in hearing, all the while engaged in hunting and devouring caterpillars and other larvæ infesting the forest trees, and mature insects.

At this season it is not uncommon to meet with parties like this in our woods, particularly a little later, when the fall migration of the little Warblers, that spend the breeding season more north-

wardly, occurs, when parties of several scores, and even hundreds are constantly hunting the wood, and the quantities of very many species of destructive insects they devour must be indeed immense, they being actively engaged almost the whole day long.

Indeed, the number of insects one bird destroys in a single day is surprising. Birds require, in fact, a large amount of food; their digestion is rapid, their blood of a high temperature, and their muscular exertion great, being, at least some species, almost constantly in motion. Let any one, who is at all skeptical respecting the probable correctness of the estimates commonly made of the immense number of insects destroyed by birds, go into the woods and silently watch the birds in their unrestrained freedom, and base his estimations upon what he himself sees. If still doubtful, let him shoot a few birds—only a few—and inspect the contents of their stomachs, examine what there remains of perhaps hundreds of partially digested insects, generally of many species, and then give us his opinions and estimations. But some may say, birds are not all day thus engaged destroying insects; observation, however, shows that there are but few periods during the day, and those of short duration, when truly insectivorous birds are in a state of rest. Having of late spent much time in the woods prosecuting my favorite study—the natural history of our native birds—I am the more forcibly struck with the immensity of the destruction of insect life by the birds, the natural, pre-ordained checks upon the numbers of the rapidly increasing insect myriads.

Having occasion to prepare some specimens for the cabinet, I have dissected many individuals for the purpose of investigating their regimen, and had designed to present a minute account of the result here; but I am already getting too lengthy, and will present only general details. Of ten species, taken without selection, but by chance, mostly in the woods, in only one, did I find a particle of vegetable diet; the Golden-Crowned Thrush, with the remains of numerous beetles and caterpillars, had a few small seeds in its stomach. The Vireos, several of which I dissected, which are commonly believed to subsist almost wholly upon whortleberries at this season, contained no other food than the remains of several species of light green caterpillars. The Orioles had dined upon caterpillars and small beetles, while the gizzards of Bobolinks were distended with what appeared to be a reddish-brown Aphis. Warblers were filled with the remains of minute beetles and small caterpillars; Pewees and Tanagers with various species of dipterous and hemipterous insects and a few beetles.

J. A. A.

Springfield, Aug. 20, 1862.

HINTS ABOUT THE DAHLIA.—The dahlia is our favorite flower, and it must from its many desirable qualities always be popular, if, at present, it is a little out of favor. Some in our yard, are now—Aug. 1st—in full perfection of bloom, and are truly magnificent. Any garden soil will grow this flower, but we prefer a compost made of old black garden mould, clay and sandy peaty loam. In wintering the dahlia, take up the tubers as soon as the tops are killed by the frost, do not separate

them, but pack them away in a box of dry sand or loam, placing them in a dry cellar out of the way of frost, till wanted for propagation in the spring. This flower is particularly worthy of culture on account of its cheapness, the ease with which it is grown, and the rich display it makes in the garden when the other flowers are gone.

For the New England Farmer.

WINTER WHEAT.

I cannot refrain from expressing my obligations to your intelligent correspondent, Dr. Silas Brown, of Wilmington, for his kind and complimentary notice of my efforts during the past fifteen years, commencing with the *Massachusetts Ploughman*, where I met much opposition, on the important subject of raising winter wheat in the New England States. But as I sowed, so did I reap from year to year, buffeting the chronic prejudices of public opinion, till the scales were removed from their eyes, and finally *that seeing was believing*. From time to time, I was sensibly reminded of the venerable clergyman who had preached line upon line and precept upon precept, a good portion of his life, to his "hard-hearted, stony ground hearers," without any visible impression. And another venerable prelate, who was about to exchange with his neighbor, saying—now, in the morning, it is all very well, but in the afternoon you must be *short*, and you must give them a *rouser*! "Why so," says brother M.? "Well, my people eat about seven and a half bushels of baked beans for Sunday dinner, and become so drowsy, that it is my misfortune to preach to the *beans* during this period of profound sleep."

I will not attempt to make an application of this sleepy indifference to these "stony-ground hearers," on the part of an honest, hard-working yeomanry; rather would I believe it to be the first ordinary impulse of the farmer to cultivate his wheat field, and to say, take courage from Mr. Brown, who began with his homœopathic dose of six quarts—"lacking of faith"—"the great obstacle to progress."

The farmer needs but to read the statement of Mr. Brown to convince him. If the "sandy," shallow, "unmanured lands" of Wilmington will produce wheat, we hope to see that large breadth turned to a more profitable account. This confirms my oft-repeated story, that poor rye lands will give as many, or more bushels of wheat to the acre than rye. The value is nearly double.

By your permission, Mr. Editor, I will make a few statements of facts. From a small fine salt bag full of wheat which I presented to Mr. Jose, of Northumberland, N. H., he obtained eight bushels—sown on mowing sod. Samuel Frothingham, Jr., Esq., Milton Hill, (near Boston,) gathered ninety-two bushels from five bushels sowing, on less than two acres of pasture ground, heavily manured from the piggery. Allowing for the quantity lodged, his yield was 50 bushels to the acre. Rev. A. B. Loring, of North Andover, (now deceased,) who had the rare combinations of a sound theologian, a good farmer, and a Christian gentleman, whose memory I shall ever respect, reluctantly received from me a bushel of winter wheat, as a present, saying, with his usual pleasantry, "Mr. P., I fear no one hereabout can raise wheat successfully but yourself, but I'll try." His

soil was strong, and side by side he sowed his bushel of wheat and a bushel of rye. He gathered eighteen bushels of wheat, and not a berry of rye, but a large quantity of straw! This phenomenon explains that *rich lands* are sure for wheat and uncertain with rye.

During the successful reign of Gov. Gardner, I modestly addressed him an importuning letter, suggesting the propriety, in his Message to the Legislature, of proposing to give the farmers a bounty on wheat, as a stimulus to engage in the work. That functionary, probably with no aspirations for agricultural fame, omitted this crowning act, which would have been a large revenue to the State. It is not too late for all the N. E. States to offer bounties of ten to fifteen cents per bushel. How could they make a better investment of money, than by encouraging the growth of the most valuable product known to man?

Some of your readers may have supposed my earnestness in this matter was but an exaggeration; that I was in hot pursuit of a hobby that would mislead them. I trust this error has received its counterpart, and by *many*, whose labors have been rewarded by an overflowing granary.

HENRY POOR.

Brooklyn, L. I., Aug. 23, 1862.

P. S.—From this time till 10th Sept., sow on light land; soak seed in salt pickle, rake in ashes, which is equal to a light coating of manure; get it in two to three inches deep, which prevents winter-kill. Mowing and pasture sod is better than old ground. Roll after sowing, especially if it is dry. Salt kills the insects, should there be any, and ashes are not a palatable alkali.

REMARKS.—We regret that, owing to our absence in plowing and seeding down an old mowing lot, for two days only, the printer had gone so far ahead that we were not able to crowd this letter into our paper of last week.

For the New England Farmer.

MOWING MACHINES.

MR. EDITOR:—I have noticed several articles in your very excellent paper relative to mowing machines. I consider them decidedly a labor-saving machine, and I may say, even, they are a great benefactor to the farmer. I therefore do not hesitate to recommend them to my brother farmers, as no doubt many are waiting (as has been the case with me) for them to be improved, simplified, and, withal, for the price to come within reach of farmers of moderate means.

I think the Ketchum or Davis' improved mower is brought to a state of perfection that will prove satisfactory upon trial. I cannot vouch for the other kinds, as I have not used them; no doubt they, too, are good machines, although I have seen no other kind but what cost higher than the Ketchum; and if they are as much better as they cost more, they must certainly be perfection itself, as no one that is not hard to please can dislike the work done by the Ketchum mower.

I notice in an article in a late number of your journal, speaking of the hinge in the cutter bar, your correspondent thinks it unnecessary on smooth land, and also thinks it dangerous on rocky ground.

All this may be true, yet I am unable to see that the hinge does any harm upon smooth land, while in case the ground is rocky, inclined or rough, all danger to the driver may be obviated, by simply walking behind the mower, as it will do just as nice work one way as the other. The hinge is an improvement in moving the machine from place to place, as many times one wishes to go through narrow places, where there would not be sufficient space to pass with the finger-bar running out four feet, horizontally, to the right—while with the hinge, the finger-bar can be brought into a perpendicular position, making the machine occupy less space in passing than a common wagon, which is convenient under many circumstances. While my brother farmers would choose the stiff finger-bar, I would put in my testimony in favor of the hinge or joint in the same.

Calais, Vt., Aug., 1862.

C. C. E.

For the New England Farmer.

FISH AND FISH-BREEDING.

Having passed a few days of my summer vacation from business, in wading up and down the cold, clear streams of the White Mountains, enticing, by all sorts of deceitful contrivances, the beautiful trout from their shady retreats under the dark rocks, and having had success sufficient to supply the table, so that I have pretty satisfactory notions of the value of that kind of food, it is natural that my thoughts should still linger upon the subject. Once, in Switzerland, near the mountains, where I spent a Sabbath, our party were asked if we should like some trout for dinner, and upon our affirmative reply, a girl of the house went down to a spring where was a cask, from which she took living trout sufficient for our supply. We were told that these were fish recently taken from the streams and kept alive for occasional use.

Now, what a luxury would it be in the country, where a variety of food is not always to be had, if we could go to our fish-pond, as we go to our poultry-yard, and take out a goodly dish for our family or newly arrived friend.

FAILURE OF FISH IN OUR STREAMS.

In old times, all our rivers and small streams abounded in fish. Salmon, and shad, and alewives, at certain seasons, filled the waters in such quantity as fully to supply the wants of all the inhabitants along the banks. Old men away up in Haverhill and Bath, in New Hampshire, point out the salmon holes in the Connecticut River, hundreds of miles from the sea. Now, although the Colonial governments took great care to provide fish-ways in the dams which they allowed to be erected, and although the statute books of most of the States abound in provisions for the preservation of fish, yet our principal streams are so far cleared of them, as scarcely to afford sport to the

angler, much less any reliable supply of food to the citizen.

The principal reason why the salmon has disappeared from our streams, is the obstruction by dams. The salmon and trout species run far back into the cold mountain streams to deposit their spawn, where it may hatch, at the proper season, and where the young fry may be safe from the jaws of the larger fish, which generally have no particular scruples about devouring their own children, if they come in their way. As the country becomes settled and cleared of wood, too, the streams become far more irregular. Drainage of land for agriculture, and the removal of small obstructions in the brooks, tend to carry the water off more rapidly after great rains, thus causing freshets, followed by droughts which are aided by the greater evaporation consequent upon letting in the sun where the stream was formerly shaded. These alternate floods and droughts break up the breeding places of the fish, destroy their spawn, and often the young fish are left to perish for want of water in their once perennial streams.

We may mourn over the lost sport, and lost supply of food from our streams, but neither mourning, nor indeed any endeavor of ours, can restore them. Severe legislation, which would, perhaps, too much have impeded manufactures, might have preserved them longer, but public sentiment, embittered by tradition of English game laws, has, in this country, little sympathy with laws for preserving bird, or beast, or fish. By the common law, and by early colonial statutes, the large streams, the bays and large ponds, were, in Massachusetts, made common to all for fishing and fowling. This is in accordance with our ideas of equality, and is far better than the odious privileges and monopolies enjoyed by the higher classes in other lands.

FISH-BREEDING IN PONDS.

Although we have lost our fish, mostly, from our public ponds and streams, we may, many of us, with little trouble or cost, supply ourselves and neighbors through the use of private fish-ponds, either natural or artificial. Neither law nor good neighborhood gives any excuse for interference with small ponds upon one's own land. The land-owner is as exclusively owner of his pond, as of his barn, and his fish are as securely protected as his cattle.

There is not room in a single article, to do much more than give some general hints, showing the principles to be regarded in fish-breeding, and referring to some instances of successful experiment. In Germany, about a hundred years ago, one Jacobi published some interesting accounts of his method of breeding trout by artificial impregnation of their ova or eggs.

About thirty years ago, a series of very accurate and scientific observations was published in Scotland, upon the habits of fish at the season of spawning, which is the material matter in artificial propagation. In France, about 1848, the attention of the government was attracted to the subject, and as the emperor in that thoroughly governed country undertakes to regulate everything, an appropriation was made, and an institution established for hatching, rearing and transporting fish. I have not found access to any reports of the success of those efforts.

In New Haven, Conn., an experiment has been going on for about five years, in stocking the Saltonstall Lake, which is about three miles in length, with the lake trout and white fish, from Lake Ontario, which is said to be progressing satisfactorily. In 1822-3, the black bass of the lakes was introduced into Waramang Lake, in Litchfield County, Conn., and more recently into other lakes in the same State, and the report of their increase in number and size is wonderful. "They have in that lake," says Mr. Beeman, of Litchfield, "multiplied very generously. Their growth is estimated to be about one pound a year, and they have been frequently caught weighing five pounds and upwards. There were less than one hundred bass originally placed in Waramang Lake; there are now probably millions, and they appear to propagate and flourish better than any other fish in the waters of that lake."

ARTIFICIAL PROPAGATION AND GROWTH.

The whole secret of raising fish is in the knowledge of their natural habits, and with the devotion of such noble lives as Agassiz to the study of what appear to many to be little things, such knowledge is furnished ready to the hands of those of us who have no taste or leisure for such studies.

There are two methods of stocking a pond with fish; first, by introducing the egg or spawn, and secondly, by putting in living fish to propagate for themselves. Many ponds probably will be found adapted to the growth of particular fish, as trout, for instance, which may not furnish the proper breeding-ground, and again it is both difficult and expensive to transport through long distances enough living fish to commence stocking even a small pond. It is therefore often advisable to assist Nature somewhat in her disposition to multiply and replenish the water as well as the earth. And wonderful it is to see how profuse is Nature in her attempts at re-production. A single salmon, it is said, deposits in a season from ten to twenty-five thousand eggs, and a perch two hundred thousand, and a single male will impregnate the spawn of several females. The greater part of these are destroyed before they are hatched, while

millions are devoured by larger fish before they are large enough to propagate. It is evident, then, that there is no want of capital on which to set up our stock of fish. The process of propagating is very simple and curious. The female fish, in her natural element, drops a few of her ova or eggs into a little place which she has scooped out in the ground. The male follows, and emits a quantity of milt upon the eggs, and they are left to their fate, and so the pair continue along, until the female has deposited all her eggs. In artificial propagation, the female is taken, when she is ready to spawn, and by gentle pressure in the water made to drop a quantity of eggs. The male is then by the same process, made to emit a portion of milt into the water, so as to come in contact with the eggs. The eggs are then placed in hatching boxes, constructed in the form of troughs or otherwise, according to the nature and habits of the kind of fish, protected by wire gratings, placed in running water of requisite temperature, until they hatch, when they are removed to a larger receptacle, and at the proper time placed in the pond. Eggs of the trout and white fish, after they are impregnated, properly packed, will remain perfect many weeks, and bear transportation without injury. In this way, the Connecticut lakes were stocked from Lake Ontario, and from Ohio.

How fast fishes grow, is a question upon which there is a difference of opinion, and as it depends much on their food, and their water privileges, it may be difficult to state definitely. Mr. Comstock, in the Patent Office Report for 1859, says well cared for trout will attain the length of about three inches the first year. In the Peabody River, far up among the mountains, the greater part of the trout are in August about double that length, and a gentleman who pretended to know, informed me that they were yearlings. Trout spawn in the autumn and hatch in spring, and probably grow to this size the second year. Mr. Treat, of Eastport, Me., who has given attention to the propagation of salmon, says they grew ten or twelve inches long the first year. A trout in a basin of a garden fountain is said to have grown but slightly a whole season, for want of food, but upon being daily well fed, more than doubled his size in a single month. For these facts, I am also indebted to Mr. Comstock, to whose valuable article I would refer the reader for other interesting information on the subject.

EXPERIMENTS IN GERMANY AND FRANCE.

Since writing the above, I have received from my friend, Luther H. Tucker, editor of that capital agricultural paper, the *Country Gentleman*, some volumes of the Transactions of the New York Agricultural Society. They are full of valuable

information, and should form a part of every agricultural library. The volume for 1859 contains a letter from Mr. Wright, our Minister at Berlin, in which he states some encouraging facts as to the artificial propagation of fish in Germany and France. He says that by proper attention to the matter, salmon in Hanover have become so abundant, that they are within the means even of the peasants, as well as the nobles; whereas, a few years ago, they were a luxury only seen on the tables of the wealthy. In one of the domains of the Emperor of France, near St. Cloud, is a small pond of about two and a half acres, supplied by springs, and but about twenty feet deep in the deepest part. In 1856 it was drawn off and refilled and stocked with trout, which at four years old, were in 1859 about a foot and a half in length. In April and May 1857, several thousand young salmon bred at the College de France two months before, were added. In 1859, at a single draft of a net, about 450 pounds of salmon were brought up in the presence of their Majesties. They averaged about a foot in length. A very important fact was ascertained: that these salmon of 18 months old, were ready to spawn, although they had never been to the sea, nor in any streams, and their eggs have been since artificially hatched.

Why should not our ponds be thus rendered productive, and so the wealth of land-owners and of the country be increased? H. F. F.

For the New England Farmer.

A FATTERN GARDEN.

MR. EDITOR:—I know you are always willing to publish communications from practical farmers. Now, I do not come under that head, exactly, but I can never bear to see an inch of ground unimproved or unadorned, and I have a desire to tell you what I have now growing on *three hundred and twenty feet*, by actual measurement, in the back yard of the house I occupy. With the assistance of my wife, who is better posted in these matters than I am, we count *sixty-six* distinct varieties of flowering plants; one prolific grapevine; one peach tree, on which we count twenty-seven large and handsome peaches; two varieties of raspberries; string and shell beans from which we have already gathered several "messes;" squash vines, trained on an out-house, with five splendid "Hubbards" attached, and five hills of French tomatoes, (not much account.) Of the flowering shrubs there are quite a number of varieties of the same kinds, which we did not add to the count. I was induced to measure the ground occupied by the above, from hearing a neighbor remark that he would admire to have a garden if he had the room. I contend that any one who has room to set a sugar-box, can have a garden. What say you?

Judge French "took us all down" to the City Hall, Saturday evening, to hear his war speech. I tell you it was great. We are so used to the *stereotype* process over here, that the Judge's style took hugely. We cry for more! G. M. L.

Charlestown, August, 1862.

WOODCHUCKS.

Speaking of boyhood, did you ever hunt woodchucks? We remember well what venatorial perturbation our young bosom used to suffer on seeing a woodchuck popping up his head above the grass, and with what headlong zeal we plunged after him, invariably to just miss catching him as his tail disappeared down his hole. This region seems to be a favorite haunt for these marmots. Some dozen we judge, are tenants on our farm. The boys have made several sagacious forays upon them, with arms and dog, but Sir Marmot has always been a little too deep for them. Not so the dog. Jocko had been down upon a visit to a neighboring dog, talking of rabbits, cats, and other things which have power over dogs' imagination. On his way home, a young woodchuck, whose ma did not know that he was out, inadvertently exposed himself. The temptation was too strong for Jocko. With one or two tremendous bounds, a nip, and a very busy shaking, and the work was done. For all the good his parents had of him, the woodchuck might as well not have been born. John skinned him neatly. He was roasted. The family sat around. The lady of the house peremptorily refused to touch the "varmint." The eldest son agreed to support the father, and the two yokners were fierce to eat woodchuck! The head of the family disposed of one mouthful, and looked around. Being watched, he boldly took a second, and was imitated. But about the third taste made it plain that woodchuck satisfies the appetite very speedily.

These singular chubby, nimble fellows have very good times of it, on the whole. They wake up from a winter's sleep—enjoy the spring, summer, and autumn. They have no migration to attend to. They lay up no stock of winter food. When the time comes, they roll up into a heap, in the chamber of their burrow, poke their nose into their belly, and tuck their tail around, to make a good finish, and then they outsleep storms, snow and winter. But we have saved one member of this family even this trouble. We have looked in the Prices Current of the *Independent* in vain to find the ruling prices of *woodchuck skins*. Can any one inform us? From the amazing enterprise shown by the boys, hitherto, they might turn an honest penny yet, in selling packs of woodchuck skins.

Meanwhile, my young marmots, you are welcome to all the clover you can eat, to all the holes you can dig. You may sit serene after your morning feed, and sun yourselves without fear of the boys, for, really, jesting apart, they are not half as smart as you are. Don't flinch if they shoot, especially if they take aim. But beware of the dog. He does not say much. He is apt to perform first, and promise afterwards.—*Beecher.*

CURING PORK.

A French chemist has lately asserted, that scurvy will never arise from the use of salt provisions, unless saltpetre be used in the curing; that salt alone answers all the purposes, provided the animal heat be entirely parted with before salting. He claims that the insertion of pork in pickle alone is not sufficient, but that it should be rubbed thoroughly with dry salt after it has entirely parted with its animal heat, and that then the fluid

running from the meat should be poured off before packing the pork in the barrel. This should be done sufficiently closely to admit no unnecessary quantity of air, and some dry salt should occupy the space between the pieces, and then pickle, and not water, should be added. Great care must be taken to fill the barrel entirely full, so that no portion of the meat can at any time project above the surface of the fluid; for, if this occur, a change of flavor ensues such as is known with rusty pork.

The pickle, of course, must be a saturated solution of salt and water, that is, so strong that it is incapable of dissolving more salt. It must be remembered that cold water is capable of dissolving more salt than hot water.—*Working Farmer.*

For the New England Farmer.

HINTS ON BUILDING.

In the May number of the *Farmer* I gave a few hints in regard to buying farms, wherein I stated that it was much cheaper to buy a farm with good buildings, than to buy one with poor, or no buildings, and then erect them. I say so still—but as a large share of the farms for sale have poor buildings, it is evident that somebody must build them—therefore, a few hints on that subject may not be inappropriate.

As older people are presumed to know all about these things, I make these remarks for the benefit of young farmers, many of whom already have farms with poor buildings, and others are daily coming into possession of such, by inheritance or otherwise. If every farmer who builds a house had a little knowledge of architecture, it would save thousands of miles of unnecessary travel for the housewife, and many useless regrets in after years.

In the first place, do not build until you are able to build a *good* house; by which I do not mean an expensive, fancy house, for such is sadly out of place on a farm, but a neat, tasty and substantial one. Many a man has mortgaged his farm to build a large, fine house, to eclipse his neighbor, and had the sheriff sell house, farm and all, to pay his debts. In planning your house, keep this old saw in view, "A little house well filled," &c., and then plan your house according to your needs, as a great deal of spare room in a farmhouse is so much wasted. Before resolving to build, get some trusty house-builder to make an estimate of the cost of a house such as you require, then add as much more to it, and if your pile of money corresponds with that, go ahead.

In planning a house, convenience should be the ruling idea, and such an arrangement of the rooms as will permit the doing the most work with the least travel. The saving of twenty-five or fifty steps a day amounts to a great deal in a life time, and may add some years to the life of the house-keeper, and make her path through life much smoother. It is very much the fashion, now-a-days, to build a large house, and then build a small place, off back out of sight of the highway, to live in. Now, then, as the kitchen, or living-room, is the one the family occupies three-fourths of the time, it should be situated in the pleasantest part of the house, if possible. As the parlor is seldom used, except when we have company to entertain, it matters but little where it is placed,

if it does not interfere with the arrangement of the other rooms.

One thing beware of, viz., small bedrooms. All rooms used for sleeping apartments should be large and airy. For this reason the chambers should be up square, and not low and sloping, as they are in all story and a half houses. It costs but little more to have the posts long enough to make the chambers square at the top, and the rooms are worth five times as much as the old-fashioned, low chambers.

The pantry should be large enough to keep flour, meal and such things in, instead of keeping them in some out-building, or in the chambers, as most people used to do, thereby making a vast amount of unnecessary travel every time any of those articles are wanted for use. The cellar should be proof against three things: viz., rats and mice, frost and water. In order to guard against the first and last, after the cellar is dug, and before the wall is started, dig a trench one foot deep, and the width of the wall directly under where the wall is to stand, and fill it with pounded stone, and on this commence the wall, which should be lain in mortar from the bottom. To guard against frost, leave a small space in the centre of the wall for three feet from the top in which no mortar is put, and have no stone reach through the wall in this three feet, and frost will not be very apt to get in.

The house should be located as near the well, or spring, as possible, or where the water can be brought near, or into the house.

No man ought to build a house without at the same time building a cistern. If he builds it at the same time he does the house, he is sure of it, and it will not cost as much as it would to make a separate job of it, and what is still worse, if he puts it off, it is very doubtful whether he ever has it. The best place for a cistern is in one corner of the cellar, as it requires no protection from frost, and no separate drain for the waste water, as it can go off in the cellar drain.

Especial attention should be given to the floors, in order to have them as smooth as possible, for the reason that most farm-house floors have to be mopped more or less, and every farmer's wife can tell how much easier a smooth floor mops than a rough one. Avoid all fancy mouldings in finishing off, as every crease and crevice are receptacles for dust and dirt, and increase the labor of cleaning the wood-work. Use none but seasoned lumber, and no poor material of any kind, as a good article is always the cheapest, and then employ good workmen, keep your house painted, and if no accident befalls it, you will never have to build another house, unless you should live longer than most mankind. Another time I may speak of out-buildings. AGRICULTURIST.

New York, August, 1862.

REMARKS.—The above article contains several excellent hints, and will be quite likely to save some persons many a hard-earned dollar. It may appear a little discouraging to the young man who is about to build, when he is told to double the cost of his estimates! This cannot be necessary to him who follows the suggestions of our correspondent. If he gets his estimates from a practi-

cal house-builder, ten per cent., we think, will be a sufficient addition to them.

The hint as to the cellar wall is excellent, as forming it in the manner described, would leave a very good air chamber, beyond which frost would seldom pass.

One can scarcely appreciate the value of plenty of soft rain water in a cistern in the cellar, until he has once had it and been deprived of it. We put one in several years ago, and with the exception of three or four weeks at one time, have never been without a plentiful supply of clear, soft water, no matter how much the demand upon the cistern has been.

Our correspondent is evidently a practical man. Some of his articles heretofore published have been extensively copied.

GREEN MANURING.

By this term I mean plowing under green crops for the purpose of increasing the fertility of the soil. It is a well established fact that all plants derive a portion of their nourishment or substance from the atmosphere; therefore any crop turned under and allowed to decay, must leave the soil more fertile than it found it, by exactly the amount of nourishment which the plant received from the atmosphere.

The main object in this kind of manuring is to obtain a plant which grows quickly and produces a large amount of foliage without occupying the ground too long, and at the same time drawing as large a portion of its nourishment from the air as is possible.

But the leaves and stalks are not the only beneficial parts; we want a plant whose roots run deep, and thus raise from a considerable depth substances which are useful to vegetation, but from their depth are not available to our common crops.

The most common mode of green manuring in this country, is the turning under of sods for corn. The benefit derived from turning under a stiff sod for corn is known to all farmers, and some allow the grass to grow as late in the spring as possible, and put off plowing as long as it will do.

We all know that corn is a very exhausting crop, and yet as a general thing it receives no manure but what is derived from the decaying grass and grass-roots which are turned under by the plow.

But there are various other plants which are available for green manuring, of which the common or red clover seems best adapted to our climate. It soon reaches its growth, has a large amount of leaves and stems, and its roots are large and fibrous, and run very deep. Rye also forms a very good crop for green manuring, but requires more time than clover, is more expensive, and derives more of its substance from the soil.

Johnson writes, "That in no other way can the same crop convey to the soil an equal amount of enriching matter as in the leaves and stems."

One great advantage of green manuring is that these vegetable substances, when turned under, decompose rapidly, and soon benefit the crop.

Another is, that grain manured in this manner never falls to the ground through weakness of the straw, but no matter how heavy the head it retains its erect position.

But we must not attribute all the benefit derived to the leaves and stalks, for the roots in some cases contain as much bulk and nourishment as the leaves and stalks. It has been estimated that the weight of the roots left in the soil by a sod four years old is equal to one-twentieth more than the weight of the grass grown the fourth year.

The best plan to bring a field under a course of green manuring, is to apply the manure on the sod for corn, which should be followed with oats in the usual manner, with a good coat of clover (say eight or ten quarts to the acre) sown among it. After the oats is taken off, the clover may be pastured lightly during the fall. Next year it should be allowed to grow until three or four weeks before it is time to sow the wheat, when the clover should be well turned under and allowed to remain until seeding time, when the wheat should be put in the usual manner.

By this plan, the manure is in good order to act on the wheat crop as soon as it is sown, and the green clover will strengthen the straw and increase the yield of grain.

This has been my practice for several years. Last spring I sowed one bushel of plaster per acre on the clover, and this fall I shall have a luxuriant crop to turn under. But I expect to plow a portion of it before harvest, and then plow again (*shallow*) before seeding with wheat and grass seed next fall. — *German town Telegraph*.

For the New England Farmer.

HOMES AND PEOPLE.

A man's home is a truthful index of himself. With his house, his yard and his fields, he publishes his autobiography for the world to read.

When we pass buildings which are neat and tasteful, with vines hiding all ungraceful angles, and flowers all about; when we hear the music of the mowing machine in the meadow, and the sewing machine in the parlor, we know just what sort of people we shall find—industrious, cheerful and generous, poor in purse, it may be, but rich in heart treasure.

Up street a little way is a frigid looking house, well built and well painted. There are fruit trees and a vegetable garden behind it; but in front the unfenced "lawn" slopes in nature's roughness to the road. In one corner, a little patch of ground is spaded, and a few consumptive-looking sweet peas and asters are striving to bloom, perhaps in competition with the heliotropes and geraniums in the window above. Who needs an intimate acquaintance with the proprietors thereof, to be convinced that the woman alone has a tender, loving heart, and a taste for the beautiful, and that she has no sympathy from her husband in her efforts to make the "wilderness blossom as the rose?"

Something of the inside atmosphere we may learn from the quantity of sunlight which is admitted. Happy faces and dark rooms seldom go in company, (except in "*fly-time*.")

From my window I can see a low, unpainted building—the roof is unpainted, as perhaps it

ought to be, the remainder I "guess at," for it is entirely hidden by tall lilac bushes. I never looked inside, but I know it is dark, and gloomy and still. Once I had a glimpse of the lady that dwells therein. One summer morning as Abbie and I were passing, we spied two blush roses outside the rickety fence, and with no thought of trespassing, we stopped to pick them. The lilac bushes parted, (there must be windows behind them!) a gray head surmounted with a black cap appeared, and a harsh voice called out, "Here, gals, let alone o' those roses!" We "skedaddled!" But what better could we expect, where there was no sunshine? Somewhere, however, in her desert heart there was a green oasis, for she cared to save her roses. And they, poor things, were trying to escape her and her shadows, seeking the common highway, where sunlight and somebody would smile upon them.

Let in the good sunshine. God only knows how we need it now, in our homes and in our hearts, while such great shadows of grief hang over us, and in nearly every household the hourly prayer is, "O, save my soldier!" "God said, let there be light!" And there is light now for us, free and overflowing, if

"While the west winds play
We throw the windows of our souls
Wide open to the day."

MARGIE.

CATTLE IN THE ROADS.

The best judicial authority in our land has decided (and the decision has been confirmed time and again) that when a person sells or deeds a portion of land to a county for a public road, he merely gives the public the right of free passage over that land, and no one has the right to remove earth from the roads,—and of course the same applies to the grass. This places the matter in the hands of the farmers, and gives them a remedy which they should make use of.

It is not proper or humane to injure or hurt the cattle thus committing a nuisance, but their owners should suffer for it. My treatment (which I find effectual) is to treat all such animals as strays, according to the law made and provided for such; that is, take them into your field, and if not soon called for, advertise them, and charge for pasturing and expenses.

We have a law against any person who owns sixteen acres turning his stock into the road, but this does not give any one owning less or none at all the right to turn theirs on the public road, because no authority can give the right.

The owners say that if farmers would keep good fences the cattle would not trouble them. But all know that a good fence will not turn an *experienced* road steer or cow, for they have a wonderful facility, acquired by long practice, of letting down bars and throwing the riders off fences, which cattle that have enough to eat know nothing about.

Whenever these cows appear within the limits of my farm, I drive them into a small lot near the house, where they remain for eighteen or twenty hours, when, if not called for, they go into the pasture meadow with the other cows, and their pasture bill begins and continues until it is paid and the cows are removed. If not called for within five days, they are advertised. In this way I and some dozen of my neighbors keep ourselves nearly clear of this nuisance.

FEVER AND DYSENTERY.

The sudden and extreme change which occurred in the weather during Saturday and Sunday, August 24 and 25, will undoubtedly prove the cause of numerous cases of fever and dysentery among our people. Many persons suppose that these diseases are generally occasioned by eating the vegetables and fruits of the season. That they are so, in many instances, is probably true, but perhaps more frequently by a sudden check of perspiration, or exposure to the night air. Great care is, therefore, necessary not to expose the body to fresh currents of air when it is moist with perspiration, or fatigued, or when sleeping. Plenty of air in the sleeping-room is favorable to health, even though it be night air,—but it should not blow directly upon the person.

At this season of the year one must be especially careful to keep a general and equal warmth of the body, eat sparingly of fruits and vegetables, and make the fruit as much as possible a part of the meal, and change the clothing as the temperature of the weather changes. At most, take but a light supper. Sedentary persons would be better without any—having had two hearty meals. At the first symptoms of sickness, stop eating and drinking, and labor, as far as possible; then put on a pair of easy slippers and clean clothing, and resolve to do *just right* in everything, and you will soon be well again! Will you try the prescription?

NATURAL BAROMETER.

The spider, says an eminent naturalist, is almost universally regarded with disgust and abhorrence; yet, after all, it is one of the most interesting, if not the most useful, of the insect tribe. Since the days of Robert Bruce, it has been celebrated as a model of perseverance, while in industry and ingenuity it has no rival among insects. But the most extraordinary fact in the natural history of this insect, is the remarkable presentiment it appears to have of an approaching change in the weather. Barometers, at best, only foretell the state of the weather with certainty for twenty-four hours, and they are very frequently fallible guides, particularly when they point to *settled fair*. But we may be sure that the weather will be fine twelve or fourteen days, when the spider makes the principal threads of its web very long. This insect, which is one of the most economical animals, does not commence a work requiring such a great length of threads, which it draws out of its body, unless the state of the atmosphere indicates with certainty that this great expenditure will not be made in vain. Let the weather be ever so bad, we may conclude with certainty that it will soon change to be settled fair when we see the spider repair the damages which his web has received. It is obvious how important this infallible indication of the state of the weather must be in many instances, particularly to the agriculturist.—*Exchange*.

SHEEP AND WOOL.

BY HENRY S. RANDALL.

You ask me to write for you on sheep. Perhaps I may do so occasionally, if I find anything which I think worth saying. There is a point in my report to which I would wish to call general attention; and, I trust, when you get the paper, you will make the remark I there submit on the subject, the text of an earnest appeal to the sheep-breeders of Ohio. I refer to *fitting up sheep for sale*, by special treatment, intended for that and no other object. This treatment consists in shearing the sheep a month or two in advance of the usual time; sheltering them from rain storms, throughout the entire year; housing them nights, throughout the year, except during two and a half or three of the warmest months, and pampering them with high feed.

All of these practices are beginning to be indulged in extensively, by breeders proper, i. e., those who look for their main profits from the annual sale of rams and ewes for breeding, instead of the annual sale of wool, and mere surplus sheep. The object is obvious. A ram, exhibited in the fall, with two months' extra wool on, wholly outshouts one sheared at the common time. If housed through the season from storms, and from dew also, after say the middle of August, he is a far darker colored sheep. If pampered, he is larger, rounder, more compact in build, and has the appearance of being shorter-legged. Besides, the additional yolk, ("gum" and "oil,") preserved on and in the wool, by sheltering, is a most important auxiliary to the weight of those "brag" fleeces, which is to be proclaimed to the world. Pampering, of itself, not only increases the amount of yolk, but it increases the actual amount of wool. A flock of ewes may be made to yield a pound of wool more a head, by very high keep; and on a large ram a difference of two or three pounds can be thus made.

More early shearing, and summer sheltering, are not fraudulent, if frankly avowed, (and avowed to the purchaser, whether he thinks to make inquiry or not,) but of what real use are they, unless they are expected to mislead somebody's judgment, by making the sheep appear better than they are? If proclaimed with a trumpet, in the ear of the inexperienced buyer, still, they would not prevent his fancy from controlling his choice.

They are expensive. The large flock-master would find them nearly impracticable. Should the true breeder wish to get advantage of his neighbor by any such means? The common excuse among breeders is that they must do it to keep up with their neighbors.

Waiving all imputations of fraud, would it not be better and manlier for all breeders to stand on, and start from the same ground, in their rivalry, and that, the ground of nature and old usage?

Pampering stands in another and worse category. This materially and permanently damages the sheep. It impairs the constitution. A sheep which has been fed very highly with grain, in the fall and winter, for one or two years, to fit it for show, and to obtain a great fleece, is like a spent hot-bed, so far as future production is concerned. Even the natural weight of fleece will not again be produced. It requires great skill to keep such a sheep in health, and the least casualty will prove

fatal to it. It has lived too fast, and its vital energies are burnt out.

Some credulous young beginner buys a ram, and half-a-dozen ewes, which have been thus treated. They have yielded monster fleeces, and he pays a monster price for them. He can scarcely raise lambs from them. They often die within the first or second year. If the seller did not apprise the buyer, both of the facts and their consequences, what is he better morally than a swindler? Even the ethics of horse-jockeyism would not tolerate the idea that an animal may, with propriety, be secretly *injured* to fit it for sale.

I understand that sheep-jockeying has made but very small progress in Ohio. I should expect this. Nature acted on too grand a scale, when she laid out your noble State, to make such petty and paltry trickeries necessary, or appropriate to your people. But there is contagion in bad example, and especially in the cunning practices and preparations of rivals in breeding.

But if the agricultural press will do its whole duty fearlessly, in such matters; if it will call things by their right names, and denounce that as unmanly which is unmanly, and that as infamous which is infamous—the practices which I have described will not extend beyond their present limits, and will only be resorted to within those limits by those who are willing to be stigmatized as two-penny tricksters.

Our agricultural societies ought to require every exhibitor of sheep, at their fairs, to state explicitly the day on which those sheep were previously sheared, and whether they have been housed from storms, or fed anything but grass between the 1st of May and the 1st of December.

One more point I will call your attention to, which is barely alluded to, in my recent report. We need better and more definite statistics of breeding flocks than we now obtain. If A. tells me that he procures five pounds of washed wool per head, from a flock of sheep containing so many rams, ewes and wethers, he gives me a very indefinite piece of information. If he gives their respective ages, he vastly adds to the information; but it is still indefinite. To judge accurately of the value and profitability of his flock, for wool production, I must know how much wool he obtains from a given amount of feed. Am I told that, as a general thing, it is not conveniently practicable to obtain this information? Well, it is at least easy enough to find the comparative product to consumption, as between different flocks. Speaking in general, sheep unquestionably consume in proportion to their weight. Those of the same breed and habits consume in the same proportion. Thus, the several varieties of the Merino, daily consume about one-thirtieth of their weight of good hay, in winter, and an equivalent of green feed in summer.

The flock, then, which produces most wool, in proportion to weight of carcass, is, other things being equal, most profitable. And between extremes of size, other things should be about equal, in a sheep kept mainly for wool production, and for the increase of its kind. Large size is not desirable *per se* in such sheep. By an invariable law of matter, small spheres, or spheroidal bodies, like the carcass of a sheep, have more surface, in proportion to weight and diameter, than larger ones. For example, a round shot, two inches in diame-

ter, weighs 1.092 pounds, and has 11.50 inches of surface to one pound weight; while a shot eight inches in diameter weighs 69.889 pounds, and has 2.87 inches of surface to the pound. This enormous disparity, in proportionable surface, diminishes, as between larger spheres, but still it is a material one, between a sheep weighing one hundred, and another weighing one hundred and fifty pounds. Too small sheep, however, are objectionable, on several almost obvious grounds, (which I have not space now to point out,) and, all things considered, fair, plump, medium size, for the breed, is the best one.

SURFACE APPLICATION OF MANURE.

From the result of various trials, Prof. Voelcker seems to lean to the opinion that the spreading of farm-yard compost on the surface of the soil, for even a considerable period before it is plowed in, is by no means so injurious a practice as we have hitherto been led to suppose. He says "that on all soils with a moderate proportion of clay, no fear need be entertained of valuable fertilizing substances becoming wasted, if the manure cannot be plowed in at once. Fresh, and even well-rotted dung contains very little free ammonia; and since active fermentation, and with it the farther evolution of free ammonia, is stopped by spreading out the manure on the field, valuable manuring matters cannot escape into the air by adopting this plan." If this is a reasonable conclusion, it goes far to remove our dread of losing, on such soils, the better portions of farm-yard manure by top-dressings. As the season will soon be here when these dressings are commonly applied to grass, it will be useful to remember this fact.

The best time for applying the manure is held by the great Cheshire grass farmers to be in the end of September or the beginning of October, particularly in a showery period, as the grass soon covers it, and renders it less liable to be damaged by the sun or drying winds.—*Mark Lane Express.*

SLEEP.—Invalids generally do not sleep enough. The importance of sound, quiet and sufficient sleep cannot be too highly estimated, as may be inferred from the physiological fact that it is during sleep that structures are repaired. The materials for nutrition elaborated during the day, but assimilation—the formation of tissue—only takes place during sleep, when the external senses are in repose. Literary persons require more sleep, other circumstances being equal, than those who pursue manual-labor occupations. If the brain is not duly replenished early decay, dementation or insanity will be the result. The rule for invalids is to retire early, and to remain in bed as long as they can sleep quietly. If their dietetic and other habits are correct, this plan will soon determine the amount of sleep which they require. Gross, indigestible and stimulating food, heavy or late suppers, etc., necessitate a longer time in bed, for the reason, nerve and stimulating beverages, as tea and coffee, prevent sound and refreshing sleep, and thus wear out the brain and nervous system prematurely. Those who are inclined to be restless, vapory or dreaming, during the night, should not take supper.—*Dr. Trall.*

PATENT OFFICE REPORT FOR 1861.

We have before us the Report of the Commissioner of Patents for the year 1861, on Agriculture. It is printed by the Government, and its typographical appearance is better than that of any of its predecessors. This is encouraging. The papers which make up the volume are—the personal report of the Commissioner, D. P. HOLLOWAY, which gives an account of the transactions of his Department for the year. In this an inquiry is made, and briefly answered, as to the *agricultural, manufacturing and commercial* resources, capabilities and facilities of this republic.

In the course of his answers to this inquiry, some interesting facts are stated. The aggregate of *coal-fields* of the United States, he says, is 200,000 square miles,—more than *ten times* as much coal as Britain, Spain, France and Belgium united! The difference in the quantity and quality of *iron* is about as great. The *railroads* now in operation amount to 30,000 miles, and the *telegraphs* to 40,000, and the productive industry of the country is to the enormous amount of *four thousand million of dollars!* The Commissioner adds:—Of all the nations of the earth there is not one at whose command there has been placed an amount of resources at all to be compared with those of the United States; not one with stores so boundless of coal, iron, copper, lead, silver and gold; not one with such a soil and climate combined, producing such diversified products in so lavish abundance; not one with a people so free, so generally enlightened, enterprising and inventive.

In noticing some departments of our industrial energy and resources, the Commissioner passes in review Great Britain herself, and four of her principal victims, Portugal, Turkey, Ireland and India, comprising in the whole *two hundred millions of men*—nearly one-fifth of the population of the globe. In speaking of the despotism exercised over the people of India, he says:—"Under their old masters they had at least one resource; when the evil became insupportable, the people rose and pulled down the government. But the English government was not to be shaken off. The government, oppressive as the most oppressive form of barbarian despotism, was strong with all the strength of civilization. It resembled the government of evil genii rather than the government of human tyrants."

The next paper is upon *The History, Industry and Commerce of Flax*, and is a long article, going into minute details of the value and culture of the plant. Then follow articles on Raising Sheep and Wool Growing, Sheep Breeding, The Breeds of Sheep best adapted to New England, Artificial Manures, Belt of Frost, or Thermal Belt, Hog Cholera, Territory of Colorado, Raspberry Culture,

Strawberries, Worn-Out Lands of New Jersey, The Consumption of Milk, Cotton in Missouri, On the Destruction of Noxious Insects, The Pear Orchard, Farming in the New England States, Indian Corn, Hop Culture, Sorghum Culture and Sugar Making, On the Recent Progress of Agricultural Science, Reclaiming Salt Marshes, On Food, The Houses of New England, Dairy Farming, Select Breeds of Cattle and their Adaptation to the United States, The Grapes of North America, On Grape Culture, Fruit Culture, Something of the Philosophy and Chemistry of Manures, and an article on Entomology.

Some of these articles are highly interesting, and would be instructive to most of us, and the whole volume is, perhaps, as applicable to the general wants of the country as one could be made. At any rate, we do not know who could have done it any better.

DOGS versus WOOL.

That many farmers have been and are now deterred from sheep breeding and wool growing, from the fear of dogs, we have no hesitation in saying. Why, then, should so many worthless curs as are found through the country be suffered to remain as a sort of incubus to this important farming interest? There should be an enumeration of all the dogs in every township in the State, and the supervisors of roads and township auditors, who are here appraisers of damages to sheep by dogs, should be empowered and compelled to destroy all dogs not claimed by responsible owners. In Paris the police are provided with meat-balls containing strychnine, which they quietly offer to the dogs running at large; in this way an immense number of dogs are destroyed. Put a high tax on the dogs; men who have valuable dogs would be perfectly willing to pay \$5.00 a head tax. Tax them high or kill them. Wool is high in price, flax is high, and cotton is very high; the latter is a tropical plant, and its cultivation is not understood here. Then why attempt its cultivation when we have both wool and flax, both valuable textiles in demand, both adapted to our climate, and the growth of both understood by our people, but much neglected by them? Bring out the wool growers and the flax growers, and clear out the dogs. Read the following from the *Maine Farmer* on the subject:

"THE DOG TAX.—One of the most beneficent things connected with the tax bill just passed the House, is the tax of one dollar per head on dogs. If it will have the effect in any degree to abate the dog nuisance, which costs the country millions of money every year in the destruction of sheep, and the discouragement of the business of wool growing, the Congress which passes it will be the benefactors of their country. A Missouri paper gives the following statistics, in connection with the subject, which will be of interest to our readers:

"One dog for each family in the United States would be a very moderate computation. This would give us in round numbers probably eight millions of dogs, each of which consumes annually food sufficient to raise a pig worth a dollar.

The cost, therefore, of feeding the dogs in the United States is \$8,000,000, which amount may be considered nearly, if not quite, a dead loss to the nation.

"A much more important question to consider, however, is, How many millions of dollars are annually lost by the sheep, and other domestic animals killed by dogs. This question cannot be solved until the attention of the census takers or assessors shall be directed to the matter. Ohio has already made the experiment, and it was found that the loss in that State of the sheep killed and injured by dogs in 1861 amounted in value to \$96,795 95.

"The extensive wool growers in some portions of the country, who keep choice breeds, have estimated their individual losses at several thousands of dollars annually, notwithstanding the utmost care to prevent them. The havoc made by a single dog who has become addicted to sheep-killing, is astonishing; and when two or three dogs associate for their work, as often happens, one or two visits will be sufficient sometimes to destroy a large flock of sheep.

"Cattle and hogs to a great extent are bitten and destroyed by mad dogs. The danger and loss of human life by the same cause is not inconsiderable, and is well worth consideration. At the same time nineteen-twentieths of the dogs are utterly worthless to their owners.

"A still more important injury which the country sustains by dogs remains to be considered. Thousands of farmers have abandoned raising sheep on account of their destruction by dogs. Others in nearly all places, are deterred from engaging to any considerable extent in this important and profitable branch of industry for the same reason. Of the great loss which the country sustains in this way there can be no doubt. The number of sheep in many of the older States has largely decreased annually. Those States are now waking up to the importance of adopting measures to decrease the number of dogs, and of obtaining a revenue from them to remunerate sheep owners for their losses. Under these circumstances we have become large importers of woolen goods and even wool. Instead of drawing on factories of our own for a supply of clothing for our immense army, we were obliged to import from Europe.

"In the West there is everything to favor, and nothing except dogs to prevent, producing immense quantities of wool, and producing it very cheaply. We have also every facility for manufacturing it in our midst. Such manufactories would increase our population, and would consume a large proportion of our surplus grain and provisions which now have to seek distant markets at a loss."—*Evans's Rural Economist*.

AN EXCELLENT SUGGESTION.—The New York *Post* suggests that the assessors, assistant assessors and collectors, whose appointment is provided for in the Tax Bill, and who will number some thousands, be selected from the ranks of our disabled soldiers. Men who return to their homes incapable of further military service are now visible in every loyal city and township, equally incapacitated for active business. Maimed, crippled and destitute, many of these brave heroes are unable to procure remunerative employment. With

broken constitutions, they come back to their families and friends with limited ability to take a prominent part in those avocations which formerly afforded them a comfortable subsistence, and in many cases become a charge upon the charitable or helpless dependants upon their families. These men, who have shed their blood to sustain the government, have a right to ask assistance from that government, and the numerous offices created by the Tax Bill will afford the means of providing them with light and remunerative employment. Much suffering may thus be prevented.

For the New England Farmer.

MINERALS IN MUCK.

MR. EDITOR:—Your correspondent from Brookfield states that he has muck thrown from a swamp, which, on exposure to the air, becomes frosted over with a substance tasting like alum. This fact is frequently witnessed in the muck of swamps or meadows, when the soil in the higher levels surrounding them contains a large proportion of clay. Alum is the basis of clay. Alum consists of sulphuric acid and alumina. A portion of this salt is leached by the rains from the clay soil, and carried to the swamps and meadows. Here it combines with the iron ore often found in such situations, and a salt of iron is formed. This is the substance which he finds, after a few dry days, upon the surface of the muck heap. He may find the iron by a simple experiment, performed in a rough way, as follows:

Collect a gill of the substance or efflorescence, and put it into half a pint of rain water. Shake it well, and let it stand 12 hours. Then strain carefully through a cotton cloth. Put the clear liquid into a white glass bottle. Add a little carbonate of potash or saleratus. Shake well together, and let the bottle stand at rest, and, after a few hours, he will find the sides and bottom of the bottle coated with iron rust. The sulphuric acid which was previously combined with the iron, has left it, and combined with the potash, and the carbonic acid that was previously combined with the potash has combined with the iron, and formed a carbonate of iron, which, being but slightly soluble in water, is deposited on the bottom and sides of the bottle.

Muck of this description may be used with much advantage on warm, sandy soils, as old pine plains. It should be well pulverized by exposure to the frost of winter—spread upon the surface and plowed in. I have seen a good crop of corn raised upon such land by the free use of just such muck, and the value of the land for pasturage much increased for several years afterwards. But the best way to use such muck is to mix a cask of quicklime with a cord of it, three or four weeks before using it. Just before using it, overhaul and mix thoroughly, and you have a valuable manure for a topdressing for grass or grain, or for almost any other crop.

J. REYNOLDS.

Concord, Aug. 29, 1862.

BIRDS AND INSECTS.—The attention of the reader is called to an exceedingly interesting article in another column of this paper, on the subject of *birds and insects*. We hope every farmer will read it.

For the New England Farmer.

HARVESTS.

BY R. F. FULLER.

When sunlight pours a golden flood
Over the autumn field and wood,
A better harvest here I gain
Than they, who only reap the grain;
And my increase, more rich than theirs,
The glorious OCTOBER bears!

My sateless eyes, from west to east,
On all the varied colors feast—
Sweet foretaste of the gems divine
That in the heavenly city shine!
The woodman hews the forest; yet,
I gain much more than he can get!

From green to gold the sunbeams change
The fruitage, ready for the grange.
The reaper has his harvest sought;
He gleans the grain; I gather thought!
But mine is far the greater good,
And satisfies with heavenly food!

For me, more than for him, it grows,
And, every day, new beauty shows.
For me it waves, to please the mind.
And, when its sheaf the reapers bind,
I reap the reaper, with his grain,
And all the good of it obtain.

For God, and for His children, still
His field must every farmer till.
The pious thought alone shall gain
The real blessing of the grain:
Thus, earth the meek inherit; though
A worldly hand may reap and sow.

Ye gatherers of the autumn, come!
To furnish forth the harvest home,
Fail not the fruits of thought to bind,
And reap rich increase for the mind!
Else, with a sordid toil, in vain
You leave the gold and get the grain!

Look on the pure ideal stores,
The autumn for the spirit pours!
O! waste not this abundance, which
God gives to make the poorest rich!
Come! in the gold OCTOBER, cull
A harvest of the beautiful!

TEMPERATURE OF THE SOIL.

If no other argument could be deduced in favor of under-draining, the fact that it equalizes the temperature during the season of growth would be enough to recommend it. The temperature of water issuing from under-drains, as compared with the temperature of the soil at the same level, shows that during its passage it parts with heat which must rise upward. During the entire month of April, the soil is much warmer at night than the air, although perhaps somewhat colder during the day. The average of its temperature, however, is much higher in a drained than an undrained field, but it is the same at night as in the day; no loss of heat occurs from the surface of the soil by evaporation, or at least a much less loss than with undrained fields, and thus we see that the temperature of the soil, from the extremes of winter and summer, is materially modified. Water falling through the atmosphere and partaking of its temperature, sinks readily in under-drained soils, while in others it runs from the surface, becomes cold by evaporation of a portion, dissolves large amounts of the more soluble, and therefore more

progressed and valuable inorganic constituents of the surface, and carries them to the nearest ditch or brook.

The same truths apply in degree to sub-soil plowing, and when the two are combined, a longer season is the consequence.

The continued downward evaporation in well prepared soils renders the feeding of the plants continuous and not unequal, as with soils badly prepared, which supply the necessary amount of moisture for the solution of surface fertilizers only during rains and at moments of heavy dews, leaving the soil incapable of permitting the free access of atmosphere and the accompanying humid condition.—*Working Farmer.*

PURE WATER FOR STOCK.

A good draught of *good* water is, probably, as refreshing to beasts as it is to people. But in the month of August nearly all domestic animals suffer far more than we imagine for want of good water. Sheep will thrive far better if they can have access to pure water. Teams will endure the heat far better if they can have a plenty of pure water, and if milch cows must drink stagnant water wherever they can find it, how is it possible for them to give their usual flow of *good* milk? It is impracticable for them to do it.

Some people allow water to stand in troughs day after day, many times, and compel their animals to drink it all up. Did such people ever drink water from an old dirty slop-pail, after it had been allowed to stand in the sunshine for two or three days? Let them try the experiment of drinking such water, and wait for the result; and then they will be prepared to express a correct opinion, whether or not such water is as good for stock, in the sultry days of August, as pure cold water would be.

Water troughs and water tanks should be cleaned frequently during the hot days of August, and fresh water pumped into them several times during the day.

Milk cows require a vast quantity of pure water in hot weather, in order to produce their usual flow of good milk.—*Country Gentleman.*

BRUCE'S PATENT FRUIT GATHERER.—This is a very simple contrivance for selecting specimens of fruit from the tree while standing on the ground, or for gathering apples on the outside branches of trees where they cannot be reached by the hand—and where a ladder would injure the tender twigs by resting against them. It is made by inserting several bent wires into an iron collar. A narrow bag of cotton cloth is inserted in this collar to catch the fruit when it has been gently pushed or twisted off; it then falls into the bag and rolls down to the hand, into a basket or upon the ground. By care, this can be done so as not to injure the fruit.

This *Fruit Gatherer* is manufactured and sold by A. H. CARYL, Groton Junction, Mass. The retail price is 75 cts., or with a short bag, 50 cts., and to those who purchase to sell again at a still less price.

For the New England Farmer.

THE BIRDS OF NEW ENGLAND---No. 21.

VIREOS.

Red-eyed Vireo—White-eyed Vireo—Yellow-throated Vireo—Solitary Vireo—Warbling Vireo.

The **VIREOS** or **GREENLETS**, (forming the sub-family *Vireoninae* of Swainson's family *Ampelidae*.) form one of our most useful and interesting groups of birds, subsisting nearly the whole year upon insects, and at no time are they found feeding upon cultivated fruits. In the form of the bill they resemble the Shrikes, it being large, stout and toothed, but in their habits have considerable similarity to the common Flycatchers; so much so that they were first described under the genus *Muscicapa*, by all of the earlier ornithologists. Thirteen species of *Vireo* are described by Baird as found in the United States, five of which inhabit the New England States. They are all migratory, spending the winter far southward, and appearing here in May.

The **RED-EYED VIREO**, (*Vireo Olivaceus*, Vieill.) is perhaps our most common as well as the plainest colored species, reaching here early in May, when its song is at once heard, loud and lively, as it hunts in the woods and thickets for its winged food. It continues with us often till late in September, and throughout the summer it warbles its agreeable, but slightly varied notes with hardly a season of intermission; during the hot July days, when most birds are quite silent, the lively lay of this harmless songster is heard from the tree-tops, and only interrupted now and then to dispose of a captured insect, throughout the live-long day; and in August, when nearly every forest-warbler has become silent for the season, the sprightly notes of this bird are still heard in the woodlands, outside of which it is seldom seen. It constructs a neat and pensile nest, suspended by its upper edge between the twigs of a sapling oak or maple, seldom more than four or five feet from the ground, though sometimes quite elevated. The materials are quite various, generally embracing fibrous grass, strips of the bark of grape vines, pieces of withered leaves, caterpillars' webs, etc., the whole compactly woven and glued with the saliva of the bird. The eggs are four or five white, with a few small, dark brown specks at the larger end. This bird is often the foster-mother of the Cow Bird. This species inhabits the whole of eastern North America, from Greenland to Guatemala.

Length, five and a half inches; alar extent, seven. Above, yellow-olive; crown, ash; line of black over the eye; beneath, pure white; sides tinged with greenish. Iris of the eye bright red.

The **WHITE-EYED VIREO**, (*Vireo Noveboracensis*, Bon.) inhabits the whole of the eastern part of the United States, southward to Texas, and is said, like the preceding, to be quite common. It is frequently taken in the eastern part of the State, but in this vicinity I am inclined to think it more rare, having examined several collections of birds made here in the last three years, amounting in all to more than eight hundred specimens, without finding a single individual, and in collecting more than five hundred specimens myself in the woods and thickets, I did not meet with it. Wilson says, "This is another of the Cow Bird's adopted nurses; a lively, active and sociable little

bird, possessing a strong voice for its size, and a great variety of note; and singing with little intermission from its first arrival, about the middle of April, till a little before its departure in September. * * * * This bird builds a very neat little nest; often in the form of an inverted cone; it is suspended by the upper edge of the two sides, on the circular bend of a prickly vine—a species of smilax that generally grows in low thickets. Outwardly, it is constructed of various light materials, bits of rotten wood, fibres of dry stalks of weeds, pieces of paper, commonly newspapers, an article almost always found about its nest, so that some of my friends have given it the name of the *Politician*; all these substances are interwoven with the silk of caterpillars, and the inside is lined with fine, dry grass and hair. The female lays five eggs, pure white, marked near the great end with a few small dots of deep black or purple.” It is similar to the preceding species in size and general colors.

The **YELLOW-THROATED VIREO**, (*Vireo flavifrons*, Vieill.) though less common than the Red-eyed, is not very rare in the forests of New England, to which it is chiefly confined; its wild, musical *pree-o, pree-a, pree-e*, etc., is not unfrequently heard, however, from the tall elms and maples that are found shading our quiet village streets. It arrives here in May, from Mexico and Central America, spends the summer with us, and returns with its young early in September. Its principal food at all seasons is winged insects, though, in common with its numerous congeners, it feeds more or less in August, upon whortleberries and other small, wild fruits. The nest of this species, Wilson observes, “is sometimes fixed on the upper side of a limb, sometimes on a horizontal branch among the twigs, generally on a tree, is composed outwardly of thin strips of the bark of grape vines, moss, lichens, and lined with fine fibres of such like substances; the eggs, usually four, are white, thinly dotted with black, chiefly near the great end.”

This neatly-colored species measures five and a half inches in length; and about nine in the extent of the wings. General color above, delicate, bright yellow-olive; line over the eye, throat and breast, bright lemon-yellow; rest of the lower parts, white.

The **SOLITARY VIREO**, (*Vireo Solitarius*, Vieill.) is the rarest of its genus in New England, and though inhabiting the whole United States, from the Atlantic to the Pacific, is a less numerous species than either of the preceding. Wilson, who first described it, saw but three individuals, and all authors agree in esteeming it rare; and we know but little concerning its history. I have met with it several times at Springfield, always early in May; my attention was first attracted to it by its beautiful song, which excels even that of the Warbling Vireo, which is such a universal favorite, being louder and more prolonged, and fully as lively and agreeable, though a little less hurried. In every instance it appeared restless and shy, constantly hopping from limb to limb, and flying from tree to tree, frequently repeating its song.

This species is five inches long, and about eight in extent. Above, fine green olive, head and neck bluish ash; breast, pale ash; sides yellow; lars, black.

The **WARBLING VIREO**, (*Vireo gilvus*, Bon.) is not an uncommon denizen of the orchard, and high trees that border the streets of our villages and cities, quite avoiding the forest, and apparently courting the society of man. It much resembles the Red-eyed Vireo in colors, but is somewhat less in size; it is found throughout the United States, from the Atlantic to the Pacific coast, reaching this latitude from the South early in May, and lingering here till late in autumn, even sometimes till October, when its sweet warble is heard from among the withering leaves, long after all other songsters have become silent, or have left for a more southern section. The almost unrivalled sweetness and easy flow of its warbling ditty, and its unsuspecting habits, often suspending its delicately-woven nest from the drooping branches of the elms that overhang the crowded streets, endear him to all. Throughout the whole summer, his soothing notes are heard, in the heated hour of noonday, when most birds are silent, as well as at early dawn, as he hunts the noxious insects that prey upon the foliage of our fruit and ornamental trees. This species often continues hunting in the same tree for hours, dextrously seizing on the insects that infest it, repeating its song every two or three minutes, or oftener; yet it is difficult to discover the bird, hidden among the thick foliage. The nest is usually fastened to a drooping branch of an apple tree or an elm, by its upper edge, and constructed of fibres of tough, dry grass, and strings, when obtainable, and the silky webs of caterpillars and spiders, and neatly lined with hair and soft, downy substances; the whole forming a substantial structure that often resists the elements for more than one season. The eggs, usually four, are pure white, sparingly marked with specks of bright brown around the larger end. It is strongly attached to its nest, and exhibits great distress when it is exposed to danger.

J. A. A.

Springfield, Mass., 1862.

TO PREVENT INK FROM DAMAGING STEEL PENS.—Throw, either into the ink-stand or the bottle in which the ink is kept, a few nails, broken bits of steel pens, (not varnished,) or any piece of iron not rusted. The corrosive action of the acid contained in the ink is expended on the iron introduced, and which is soon covered by the decomposition of the sulphate of copper, which gives the coppery hue observable on metallic pens used with common ink. The ink will not affect the pen, or, should it still do so, it will be necessary to add more iron, and the mischief will be entirely remedied.

CHLORIDE OF LIME AS AN INSECTICIDE.—Dingley's *Polytechnisches Journal* says that sprinkling beds of vegetables with even a weak solution of this salt effectually preserves them from caterpillars, butterflies, mordella, slugs, &c. It has the same effect when sprinkled on the foliage of fruit trees. A paste of one part of powdered chloride of lime, and one-half part of some fatty matter, placed in a narrow band round the trunk of the tree, prevents insects from creeping up to it. It has ever been noticed that rats and mice quit places in which a quantity of chloride of lime has been spread.

For the New England Farmer.

THE POTATO ONION.

MR. EDITOR:—I noticed an inquiry in your last paper from an "Inquirer," in relation to the culture of the potato onion. I have been in the habit of cultivating the potato onion to a limited extent for more than twenty years. Whether they can be raised to "supply the demand for onions raised from the seed," is a question to be decided by connoisseurs. "The demand will produce the supply." The seed of the common onion will cost you much less than the bulbs of the potato onion. This is a drawback on the culture; but if they were to come into more general use, the epicure and the public would realize their value, and regardless of cost would purchase no other. For soups and chowders, and, in fact, for all culinary purposes, they are delicious; in comparison, all other onions sink into insignificance.

They are a very early onion, and should be set out or planted as early as the first of April, and earlier if possible. I prepare the ground with a liberal dressing of compost manure, which I plow in and level off with a harrow or rake; I then draw a line and dig a trench sufficiently deep to cover the bulb. Place them about three inches apart in the trench, cover carefully and roll with a light garden roller, or press the earth around them with the feet. Otherwise, if not planted deep enough and the earth made compact when taking root, the onions will be crowded out of the ground.

They may be set out in rows about fifteen inches apart, or sufficiently wide to allow the use of a wheel hoe, which I have found the best instrument for weeding them.

I send you some samples of the potato onion, which I raise. There are other varieties, but none as good. The largest will produce clusters like sample—the small onions in the clusters are called seed, and each one of them will, in another season, produce one large one.

I am sorry to say that the potato onions are not exempt from the ravages of the maggot, as, for two or three years past, we have discovered indications of their presence. I raise from 20 to 30 bushels per year, and find no difficulty in selling them at \$2.00 per bushel. I have sold them as high as \$5.00 per bushel to agricultural warehouses. I paid six cents each for tubers 20 or 30 years since.

HORACE COLLAMORE.

North Pembroke, Sept. 2, 1862.

REMARKS.—Our old friend and correspondent, MR. COLLAMORE, will accept our thanks for this interesting and valuable communication. It is just the information many persons have desired to receive, and is worth the cost of the *Farmer* for a year to numbers of its readers.

THIRST WORSE THAN HUNGER—The disturbance to the general system which is known by the name of raging thirst is far more terrible than that of starvation, for this reason: during the abstinence from food, the organism can live upon its own substance; but during the abstinence from liquid, the organism has no such source of supply within itself. Men have been known to endure absolute privation of food for some weeks; but three days

of absolute privation of drink (unless in a moist atmosphere,) is perhaps a limit of endurance. This is the most atrocious torture ever invented by Oriental tyrants; it is that which most effectually tames animals. Mr. Astley, when he had a refractory horse, always used thirst as the most effective power of coercion, giving a little water as the reward for every act of obedience. The histories of shipwrecks paint fearful pictures of suffering from thirst; and one of the most appalling cases known is the celebrated imprisonment of 146 men in the Black Hole of Calcutta.—*Blackwood.*

For the New England Farmer.

HOW TO SET FENCE POSTS.

MR. EDITOR:—I wish to make, through the columns of your valuable paper, a few suggestions, in regard to the setting of fence posts. I am convinced that this part of farm work, as usually practiced, is performed much more frequently than would be required, if they were properly prepared and set at first.

If this is true, the cost of maintaining post and rail or board fences is much greater than the necessity of the case requires; and he who can induce the farming community to look upon it in that light, and act accordingly, will at last have performed a little good. But to the point; to illustrate the subject, I will relate a few facts that have come under my own observation.

About sixteen years since, my father erected a post and board fence around his barn-yard. The posts were set, as was, and still is the custom, to a wide extent, with the large, or butt ends in the ground, with the exception of three which were accidentally placed with the top end of the timber down. This fact was not noticed at the time, but at the expiration of seven or eight years, all of these posts, with the exception of the three that I have mentioned, were decayed and broken off; when, upon examination of those remaining, it was discovered that they were set as stated above. Those three identical posts are still standing as originally set, to-day, and bid fair to last a number of years. If that part placed in the ground had been charred, that is, burnt to a coal, I have no doubt but what they would have lasted twice as long as they otherwise would. The process of charring is very simple and easily performed, as one man can prepare one hundred and fifty or two hundred posts in a single day. I never have had an opportunity to determine how long charring will preserve a post, but have seen some treated in this manner taken from the ground at the end of six years, as sound and hard as when placed there.

I suppose the reason that posts set top end down are preserved such a length of time is this: in all timber, to a greater or less extent, there are many minute canals or ducts, usually visible to the naked eye, extending lengthwise, which serve, when the tree is growing, to convey the sap from the roots through the trunk to the boughs, branches and leaves of the tree. In these ducts or veins there are many minute valves opening upwards, not impeding the sap in its upward flow, but which immediately close when a pressure is brought to bear in an opposite direction. Now when the butt end of the post is placed in the

ground, if the ground is, or becomes wet, the water immediately rises by capillary attraction up through its natural channels into the body of the post, thus becoming alternately wet and dry, and causing it rapidly to decay. On the other hand, if the top end is placed in the ground, the tendency of the water to pass upwards instantly closes these valves, perfectly excluding the water, keeping the post dry, and preserving it to a certain extent from the hand of time.

In conclusion, I hope all who have occasion hereafter to erect a fence of this character, will follow the suggestions here given; and my word for it, they will never look upon it, as labor lost.

North Pawlet, Vt., Sept. 1, 1862. DIKE.

NORTHERN SUGAR.

It would be a singular result of the rebellion, if the North and West should become independent of the Southern climes in the articles of sugar and cotton. The cotton culture will be tried next season in regions farther north than it ever was before, with what results time will show. The various products that will yield sugar will also become more extensively sought after.

The sorghum, the sugar beet and the rock maple, are all demanding attention. They can all be used in Maine and the other New England States. The maple and the beet are at home in the North, and the sorghum and imphee produce abundantly in the Western States. The earlier varieties of imphee will undoubtedly ripen in Maine.

The sorghum has already been proved in the West, and its culture next season will be quadrupled. A Sorghum Convention was held at Rockford, Ill., last Fall, where many samples of the syrup and some sugar was exhibited and much valuable information elicited, which will lead to improvements both of culture and manufacture the coming season. One individual had made 16 gallons of syrup from an acre. Another had made 100 gallons from three-fourths of an acre. Seven gallons of juice made one of syrup.

The Illinois Horticultural Society, at their meeting held in Chicago not long ago, discussion upon the subject of the production and manufacture of sorghum syrup and sugar. Among other interesting facts it appears that "The cultivation of the sugar cane in the Northwest is no longer a matter of doubt. As high as 300 gallons of syrup have been produced per acre. One hundred and fifty gallons is a small yield;" and it was confidently asserted that they would soon have a home supply and a surplus to export to the Eastern States.

Our farmers in northern New England should be preparing themselves for the maple sugar campaign. The time for it will soon be along, and should be improved in every way possible.—*Maine Farmer.*

WASHING SILK.—No person should ever wring or crush a piece of silk when it is wet, because the creases thus made will remain forever, if the silk is thick and hard. The way to wash silk is to spread it smoothly upon a clean board, rub with white soap upon it, and brush it with a clean hard brush. The silk must be rubbed until the grease is extracted, then the soap should be brush-

ed off with clean cold water, applied to both sides. The cleansing of silk is a very nice operation. Most of the colors are liable to be extracted with washing in hot suds, especially the blue and green colors. A little alum dissolved in the last water that is brushed on the silk, tends to prevent the colors from running. Alcohol and camphene, mixed together, is used for removing grease from silk.—*Scientific American.*

INFLUENCE OF SUNLIGHT.

A mistaken notion prevails with many that animals need little or no light while confined in the stable. Physiologists declare that, other things being equal, families who occupy apartments on the sunny side of dwellings are the most healthy and happy. Fresh air and sunlight are promotive of health, and yet, in the construction of stables for animals, many seem to forget that these requisites are important.

One would suppose that in localities where the attention of farmers is almost exclusively devoted to stock, anything connected with the management of animals conducing to their health and comfort would be the subject of thought. Yet, how few even for a moment are willing to give this subject the attention it deserves. To suppose that an animal, confined in a dark, damp, unventilated stable, will thrive, and be able to yield the same profit that it would if occupying a place the reverse of these, is to suppose an impossibility. Disease, though it may not at first be apparent to the eye, is, nevertheless, doing its work, and in some way will make itself felt to the loss of the owner.

Hogs that have their pens so made that the sunlight can be freely admitted, thrive better and are more easily fattened than when confined in pens where the rays of the sun never penetrate. So with horses. Serious diseases are engendered from badly constructed stables. The horse is fond of fresh air and light, and his stable should be provided with the means of thorough ventilation, and the admission of the sun's rays; he enjoys these quite as much as his master, and it seems thoughtless and cruel to deprive so good a servant of that which costs nothing, but yet serves to make him happier and more contented with his lot in life. Doubtless, animals, like men, have their gloomy days in which things are turned topsy turvy, and could their feelings be expressed in words, we doubtless should hear sad stories of their being compelled, under the whip, to do heavy and exhausting work when sick, and of being deprived of comforts through the ignorance and thoughtlessness of those who have them in care.

On the score of economy, we believe that it pays to treat all animals kindly, and to provide them with suitable buildings for shelter. We know from actual experience, that the cow that has been wintered in a warm, dry, well ventilated stable, properly fed and cared for, will pay for all extra trouble and labor, in the increased quantity and better quality of milk yielded, through the summer following. When we hear of dairymen complaining that the annual yield of cheese per cow has fallen down to 300 or 350 lbs., we have strong suspicions that the fault lies somewhere in the keeping or management of stock. We hold that a good stable for stock should be provided with windows

to admit sunlight; it should be dry and well ventilated, and the same general rules for health, applicable to persons, should be ever before the eye of the farmer, and guide him in his treatment of stock.

If any one doubts that sunlight has a beneficent influence on health and spirits, let him compare his feelings during a long term of cloudy wet weather, and then again, when every day is pleasant with warm, bright sunshine. The difference, we think, will be observable, at least, with most persons.—*Dairy Farmer*.

AUTUMN.

Now sheaves are slanted to the sun

Amid the golden meadows,
And little sun-tanned gleaners run
To cool them in their shadows;
The reaper binds the bearded ear,
And gathers in the golden year;
And where the sheaves are glancing,
The farmer's heart is dancing.

There pours a glory on the land,
Flashed down from Heaven's wide portals,
As Labor's hand grasps Beauty's hand
To vow good-will to mortals:
The golden year brings Beauty down,
To bless her with a marriage crown,
While Labor rises, gleaming
Her blessings and their meaning.

The work is done, the end is near,
Beat, Heart, to flute and tabor,
For Beauty wedded to the Year
Completes herself from Labor;
She dons her marriage gems, and then
She casts them off as gifts to men,
And, sunbeam-like, if dimmer,
The fallen jewels glimmer.

There is a hush of joy and love
Now giving hands have crowned us;
There is a heaven up above,
And a heaven here around us!
And Hope, her prophecies complete,
Creeps up to pray at Beauty's feet,
While with a thousand voices
The perfect earth rejoices!

When to the Autumn heaven here
Its sister is replying,
'Tis sweet to think our golden year
Fulfills itself in dying;
That we shall find, poor things of breath,
Our own Soul's loveliness in death,
And leave, when God shall find us,
Our gathered gems behind us. *London Athenæum*.

For the New England Farmer.

STATE AND COUNTY SHOWS.

In the published accounts of these, I perceive an omission of many names that I have been accustomed to see, in years gone by; and what is more, that some State and County Societies have deliberately determined not to have a Show or Fair during the present season. This presents a question of vital importance to the farmer,—Are these Shows, as a whole, productive of any real benefit? Or are they mere *holidays*, for the gratification of the rabble? No one has taken a deeper interest in these shows, for the last *forty-four years*, than I have myself—never having failed to be present at the show in my own county, and

often in other counties and States. I should like to see the reasons for and against such shows fairly stated. I believe the topic to be of vital importance to the agricultural community.

ESSEX.

For the New England Farmer.

ARE FOWLS PROFITABLE TO THE FARMER?

This is a question often asked, and I now have in my possession three letters from correspondents upon this question, and with your indulgence, I will answer them through the extensively circulated columns of the *N. E. Farmer*. My positive answer is—Yes. Fowls will pay a large profit when properly fed and cared for; a comparatively few in number will give a better return than a large flock; although they may receive extra care and attention, it seems impossible to keep a large number, even in a spacious enclosure, without disease. Twenty good fowls will lay more eggs, and be in better health, when enclosed in a coop, than one hundred in the same enclosure, for two years. One hundred fowls may succeed well in a large coop for a short time.

Another mistake we are very liable to make, is in keeping many breeds of fowls together. Have but one breed, keep them well, and ventilate their coops. A good, hardy breed of fowls do not require such warm and close houses as they are generally kept in, although they require a dry coop, free from drafts. Ventilate freely on the top, if possible, feed through the winter upon corn and barley, and occasionally with raw fresh meat; beef preferred.

I still have a great preference for the *Brahma* fowls for our climate. They are hardy, and lay through the winter season as well as the summer, when eggs are worth double the price that they are in summer. They may be kept in the coldest coop, if fed properly, and in regard to profit, no fowls I ever saw, if kept by themselves, pay in every respect so large a profit as this breed. A neighbor of mine, a shrewd and very successful farmer has kept no other breed of fowls for many years; he winters about twenty-five pullets in his barn-cellar, and has eggs from them through the entire winter. In March he sets his hens, and hatches from one to two hundred chicks, and keeps them in his barn-yard, allowing them to enter the barn at night; by the 4th of July he disposes of all, except his winter stock, alive, at an average price of fifty cents each, to the butcher. He has now laying pullets, which commenced laying by the last of July, hatched in March. I know of no other breed of fowls that will do this. My flock, when hatched in May, was 110. I have now 101, having lost but nine chickens this season; they are very hardy, which, in our climate, is a great recommendation to any breed of fowls. Fowls may be unprofitable, when kept, as many farmers are in the habit of keeping them, allowing them to wander about the farm, laying when they please, and feeding themselves upon melons, tomatoes, corn and other valuable articles of food. I find, from practical observation, that fowls are like all other animals, they will be very unprofitable if not properly cared for, and very profitable if kept as they should be.

JOHN S. IVES.

Salem, Sept. 1, 1862.

THE NEW MONITOR, NAMED "NAHANT."

We took a stroll, the other day, as far as the "City Point Works," at South Boston, to see the new iron-clad vessel "*Nahant*," now being constructed at the yard of HARRISON LORING, Esq. Those who have never seen a vessel of this kind can scarcely realize, by any description, the immense strength of one, or the skill and cost required to complete it. The sounds around it were louder than the voice of many waters. Little forges were glowing with red-hot coals heating the bolts that little boys were everywhere dropping over the sides of the vessel, suspended on a hook at the end of a cord. These were eagerly caught in iron tongs, and when entered into the rivet holes, were smitten with blows from two or three sledges and hammers with a rapidity that seemed to outstrip the motions of the quickest machinery. Every part of the vessel was going on at one point or another,—the sides, the deck, the engine, water tanks, quarters, the terrific ram in the bows, and the turret. This stood on a platform resting upon the ground, and I suppose when partly done will be hoisted on deck and finished. The whole thing is so unlike any vessel of common construction, and the means of defence and aggression so unlike all the usual arts of warfare, that the mind was bewildered with the strangeness of the scene, when contemplating what it was all for. Some of the proportions of the "*Nahant*" are—

Length.....	200 feet.
Breadth.....	47 "
Thickness of wood armor.....	3 "
Thickness of iron armor, outside of wood.....	6 inches.
Thickness of turret.....	11 "
Thickness of deck plating.....	1 "
Diameter of turret.....	21 feet.

Into this turret are to be placed two or more guns of great weight, which are to hurl destruction to every approaching foe, or run it through with the terrible beak that projects from the prow.

For the New England Farmer.

WHEAT---WHEAT.

MR. EDITOR:—I noted your editorial in reference to the small, "black insect that swarms on the wheat this season." Is this insect confined to the wheat alone? Are the "fields of wheat" spring or winter grain? And from whence comes this new enemy? Has it originated in foreign seed? Can it be traced to any one field? Last year, some of your correspondents described a "louse or aphid," of peculiar shape, and if I mistake not, it appears on all grains. You say "these destroyers sometimes infest the wheat in Europe to a great extent." This indicates to me what I have often written, that the eggs of the insect are deposited in or on the berry, and if imported from abroad or transported from the West, or elsewhere, it is fair to suppose the insect goes with its natural food in the form of an egg, or in its own peculiar form of propagation. No one ever saw the weevil in any

grain but wheat. It seems to be its natural food. So it is with the onion maggot.

How is it possible that seed wheat, coming hundreds or thousands of miles, and for the first time an attempt is made to raise it on a New England farm, this troublesome insect appears with the grain? Is it fair to suppose it an incorporated insect of the farm, or was it brought there in the grain? This may be a proper subject for your scientific readers. Will they please inform us?

Now for the remedy for this evil in the start, which no doubt is more or less effectual, and perhaps for the fiftieth time I have troubled your readers to read it—soak the grain in salt pickle twelve hours, then rake it in wood ashes and sow when damp; soaking throws to the surface foul seed and insects, quickens the germ, and perhaps may destroy the egg that attaches to the berry. It is a powerful fertilizer, &c.

I would again say to the farmer, on your light plain rye land, I should not omit putting in wheat as late as the 25th of this month. Many of you have little or no manure. Then plow in ashes or slaked lime with the grain, say three inches deep, or with a cultivator two to three inches deep, and you will not regret your labor. Use the roller if you can borrow one. In England and Scotland they roll all their grass lands in spring; it packs the roots and increases the crop. We shall learn the value of the roller by-and-bye.

Brooklyn, L. I.

H. POOR.

N. B. Light plain lands are two weeks earlier than heavy grass lands.

MOVING.

People who live in cities and move regularly every year from one good, furnished, right-side-up house to another, will think I give a very small reason for a very broad fact; but they do not know what they are talking about. They have fallen into a way of looking upon a house as a sort of exaggerated trunk, into which they pack themselves annually with as much nonchalance as if it were only their preparation for a summer trip to the sea-shore. They don't strike root anywhere. They don't have to tear up anything. A man comes with a cart and horses. There is a stir in one house—they are gone; there is a stir in the other—they are settled; and everything is wound up and set going for another year. We do these things differently in the country. We don't build a house by way of experiment and live in it a few years, then tear it down and build another. We live in a house till it cracks and then plaster it over; then it totters, and we prop it up; then it rocks, and we rope it down; then it sprawls, and we clamp it; then it crumbles, and we have a new underpinning, but keep living in it all the time. To know what moving really means, you must move from just such a rickety-racketty old farm-house, where you have clung and grown like a fungus ever since there was anything to grow—where your life and luggage have crept into all the crevices and corners, and every wall is festooned with associations thicker than cobwebs that are pretty thick—where the furniture and the pictures and the knick-knacks are so become a part and parcel of the house, so grown with it and into it, that you do not know they are chiefly rub-

bish till you begin to move them and they fall in pieces, and you don't know it then, but persist in packing them up and carrying them away for the sake of "auld lang syne," till set up again in your new abode, you suddenly find that their sacredness is gone, their dignity has degraded into dinginess, and the faded, patched chintz sofa, that was not only comfortable, but respectable, in the old wainscotted sitting-room, has suddenly turned into "an object" when "lang synes" go by the board, and the heirloom is incontinently set adrift. Undertake to move from this tumble-down old house, strewn thick with the *debris* of many generations, into a tumble-up, peaky, perky, plastered, shingly, stary new one, that is not half finished, and never will be, and good enough for it, and you will perhaps comprehend how it is that I find a great crack in my life. On the further side are prosperity, science, literature, philosophy, religion, society, and all the refinements and amenities, and benevolences, and purities of life—in short, all the arts of peace and civilization and Christianity—and on this side—moving.—*Atlantic Monthly*.

For the New England Farmer.

HARD COAL ASHES.

MR. EDITOR:—On page 362 of your August number I find an article on the use of hard coal ashes for manure, which induces me to make a suggestion that they are much more valuable as an absorbent of the fertilizing elements in manures, than is generally supposed, and may be worth something as a disinfectant.

It will not be difficult for some of your readers to try the experiment as I have, and satisfy themselves. My belief is, that all the ashes and all the drainage of all our cities should be combined, and thus, out of two evils, bring an inexhaustible good. I have no doubt but that the effluvia proceeding from the slaughter-houses in Brighton could be thoroughly neutralized by the use of anthracite coal ashes, and the atmosphere rendered as pure as in any other neighborhood.

It will be found, upon mixing a moderate proportion of ashes with the contents of the privy, cess-pool or hog-pen, that in a short time the offensive odor has entirely disappeared.

It is not expelled, as by the use of chlorides, but held in combination until, by its use as manure, the earth and roots of plants liberate and use it.

Dry peat, charcoal dust and other like substances have the same power. But nothing is so *cheap* as hard coal ashes, which have generally been considered only a nuisance. D. WILDER, JR.

IMPORTANT COMMERCIAL PROJECTS.—A correspondent, writing from Rio de Janeiro, under date of July 14, says that Senor Tavarres Bastos, a leading and eloquent statesman, has introduced into the Brazilian Chambers a proposition (1st,) to give subsidy to any company, (meaning a United States company,) of \$100,000 to run a line of steamers monthly between New York and Para, to connect with the Brazil mail steamers which run between the Amazon and the La Plata, touching at all intermediate ports; or (2d,) to give the same United States steamers a subsidy of \$300-

000 to make regularly monthly trips from New York to Rio, touching at six or eight of the principal ports of the Empire, beginning with Para. Another proposition has been laid before the Chamber, which will doubtless pass, that in two years' time, the Amazon, and its branches, be thrown open to the flags of the world; and in five years hence the river Plata and its vast continuations (the Parana and Paraguay,) which are mostly in Brazil, be also thrown open to the commerce of all nations.

LACUSTRINE HABITATIONS.

A work has been recently published in France by M. Troyon, entitled the "*Lacustrine Abodes of Man*," or the relics of primeval antiquity discovered in the lakes of Switzerland. It appears that the boatmen on those lakes have, from time immemorial, observed in various places near the shore, under the calm transparent water, the heads of numberless wooden stakes protruding through the deposit which is generally found at the bottom. Along with these, large blocks of wood have here and there been visible, stags' horns of great size, bones, and fragments of pottery. There was a lurking traditional belief that these were the remains of dwellings, occupied by the people of ancient times, who built on the lakes in order to shelter themselves from wild beasts. For centuries, however, no one had been tempted to look closer into these scattered fragments of a forgotten world. It was not until the year 1854 that the attention of scientific men was called to the discovery, and the result of the earliest investigations on the subject was to establish the existence of a submerged "lake village" in a certain part of Lake Zurich. This discovery was rapidly followed by others. Similar sites have been traced in Lakes Constance, Geneva, Neufchatel, Burine, Morat, Sempach, and in several smaller ones. Indeed, they now seem to multiply in the note books of archaeologists with almost inconvenient rapidity. Two years ago twenty-six such village sites had been described in the Lake of Neufchatel alone; twenty-four in that of Geneva; sixteen in that of Constance; and the amount of ancient objects recovered from their debris has reached a truly formidable magnitude. Twenty-four thousand of these have been raised from a single locality in Lake of Neufchatel. "We are still very far," says M. Troyon, "from having recovered all the relics imbedded in the silt of the lakes and peat of the valleys. Nevertheless we are by this time acquainted with a sufficient number of points of remarkable richness to enable us to give, by their description, an idea of that ancient population which had the habit of living on these waters."

These people were of smaller stature than the present inhabitants of Europe, as is shown by the diminutive size of their ornaments, and in particular by the grasp of the handles of their implements. They were a race of hunters; arrow-heads and lance-heads and the bones of wild animals are heaped around their dwellings. They were also pastoral, for the bones of sheep and oxen, and in some instances of a small species of horse, are found in close juxtaposition with those of the deer, the wild boar, and other beasts of the forest. They were, to some extent, agricultural, for grains of wheat and barley, kernels of culti-

vated fruit, nuts and cakes of unleavened meal, and even slices of small apples and pears, as if cut for preserving, are found among the relics. There are less certain traces of mats, or cordage, of hemp or flax. These pre-historical men had their domestic animals, and fed their dogs with the relics of their dinner; for almost all the bones containing marrow are broken, while many of them are marked by the teeth of dogs.

For the New England Farmer.

AGRICULTURE IN COMMON SCHOOLS.

MR. EDITOR:—Some time ago I wrote an article—one of a series of articles on the subject of Agricultural Education—on this two-fold question: "Ought agriculture to be taught in our common schools? In their present state and condition, can it be successfully taught there, without doing more harm than good?" In the simplicity of my heart, after pointing out the primary and fundamental branches which ought to be taught, and thoroughly taught, there, I offered three reasons which were convincing to my own understanding, and which I thought would convince others, that agriculture should not be introduced, and could not be successfully taught in our common schools.

Imagine my surprise on reading, in a subsequent paper, the rambling remarks of your learned, but anonymous correspondent, "More Anon," (whose remarks have no more to do with the merits of the question, than they have with the merits of the Southern Confederacy,) who charges me with a want of "good judgment," and with treating the subject unjustly and unfairly! I do not plead guilty to this charge. Nor do I think I am so "sleepy" or so ignorant on the subject as the learned gentleman seems to suppose. I am tolerably well posted up on schools of every grade. For over thirty years I have been voluntarily immured within the walls of a school-room, and consequently ought to know what they are capable of doing, and what they were intended to do. And this I know, that they never were intended to teach the whole circle of the arts and sciences, but those fundamental branches only which are indispensably necessary to every occupation or pursuit. The branches intended to be taught were necessarily limited, precise and definite, and not left to the choice of a hundred whimsical and wayward children in the school.

I am sorry to be obliged to say, that this article of "More Anon," altogether different from any of his preceding articles, sounds and reads very much like any one of Jeff Davis' messages to the rebel Congress, for he evidently follows the example of Jeff, and "walks around the truth." There is, however, this difference between them. The one signs his own proper name to his own production: the other screens himself from responsibility by taking shelter behind the masked battery or a fictitious name. Which is the more honorable of the two I will not undertake to decide. But this I will say, that whoever attempts to review the remarks of others, especially if he be an anonymous writer, should be extremely careful to treat them and their remarks with due respect; at least, he should do justice to himself and his subject. I submit, that "More Anon" has not done this. All that he says about my special pleading as "a lawyer who is employed to do his utmost in making

out a case, or one who is so thoroughly prejudiced and one-sided as to be utterly blinded to the truth and the reality of things," is wholly uncalled for and gratuitous; or, if it has any possible application, it applies only to himself and his treatment of the subject.

What I have written on this subject has been over my own proper name, and with the fullest conviction that I was giving utterance to the simple, naked truth. I hold myself responsible for all that I have said. I have not yet said all that I have to say on this subject. Thus far, I have endeavored to show in my simple way, in a very brief article, that agriculture could not be successfully taught in our common schools without doing more harm than good. To prove this, I have urged the three following reasons: "First, it would injure the schools by diverting the attention of the scholars from their other necessary studies. Secondly, our teachers are not qualified to teach it, and have no means of explaining it. And thirdly, our scholars generally are not old enough to understand it, and have no time to devote to it, without neglecting their other studies."

Now, if "More Anon" will answer these objections to the satisfaction of all reading and thinking men, he will confer a great favor on the public, and crown himself with distinguished honor.

JOHN GOLDSBURY.

Warwick, Mass., Sept., 1862.

AGRICULTURAL PRODUCE OF THE UNITED STATES.

The census for 1860 gives the following comparative statement of the agricultural products of the United States:—

Articles.	1849.	1859.	Increase.
Wheat, bushels.....	100,485,944	171,183,381	70,697,437
Indian corn, bushels.....	592,071,104	830,451,707	238,380,603
Cotton, bales.....	2,445,793	5,196,944	2,751,151
Butter, lbs.....	248,675,322	460,509,354	211,834,532
Cheese, lbs.....	105,535,893	105,875,135	339,242
Animals, slaught'd.....	\$111,703,142	\$212,871,653	\$101,168,511
Sheep, No.....	21,723,210	23,517,756	1,594,536
Wool, lbs.....	52,512,959	60,511,343	7,998,384
Sugar cane, lbs.....	237,183,000	302,255,000	65,072,000
Molasses, gallons.....	12,700,991	16,337,080	3,636,089
Sugar, (Maple,) lbs.....	34,253,436	38,863,884	4,610,448
Tobacco, lbs.....	190,752,655	429,390,771	229,638,116
Wine, gallons.....	221,249	1,260,008	1,238,759
Hay, tons.....	13,833,645	19,129,128	5,295,483
Orchard produce.....	\$7,723,186	\$19,753,361	\$12,030,175

On an average, the increase in the aggregate value of agricultural products, during the ten years, is more than double the ratio of increase in the population. The product of wheat, in 1859, exceeded that of 1849 by over seventy million bushels, which is an increase of seventy per cent. The growth of population for the decade has been about thirty-five per cent., or one-half the increase of the wheat crop. This shows that we are steadily increasing our surplus product of breadstuffs, and putting ourselves in a position for supplying the deficiencies of certain of the grain-growing countries of Europe. A similar increase has occurred in the produce of butter, the yield of which has enlarged to the extent of 211,834,532 pounds.

TO DRY SWEET CORN.—Cut the corn from the cob; place upon tins and put it in the oven; stir to keep from scorching. After it is thoroughly scalded, set in the sun to dry. After it is perfectly dried tie up in sacks and put away for winter use.

MASSACHUSETTS FARMERS.

A General Survey—Old Hats, Rags and Pants in the Windows
—Condition of the Buildings—Gardens—Shrubby and Flow-
ers—Education—Manners—Dress—Religion.



THE traveller who loves the country and natural scenery, who has a quick eye to detect errors in the art of farming, and skill and experience from which to suggest improvements, may learn the condition

of the region through which he passes, even though his journeyings are brief and his interviews with the people few. There is a general outline of the farm, a certain impress stamped everywhere upon it, that indicates its degree of prosperity, and the amount of skill and industry that are expended upon it.

In our late ramble through the *western* portion of this State several things were observed, a reference to which may be of some interest to the reader in a suggestive form, or in a statement of facts.

The first thing that arrests the attention of the traveller, is the *improved condition of the buildings*, as compared with their appearance thirty years ago; and as the house we live in seldom fails to have an important moral influence upon its occupant, the inference is natural that the mind and manners have advanced with the exterior things around them. And this is true. At the period alluded to, a large number of the dwellings that came to the view of the traveller bore evidences of premature decay. The paint was gone; if they had blinds they hung by one hinge, or some of the slats were missing. A clapboard, here and there, was clattering in the wind; the mortar was out in the joints of the chimney, and scattered bricks were resting on the moss-covered roof. The windows rattled and screamed at every blast; on the front, broken panes were covered with an old newspaper, either pasted on or stuffed in, while on the ends or back side of the house, cast-off pantaloons and old chip hats shut out the cheerful light as well as the pitiless storms, and gave the dwelling that patched and motley appearance that indicates the road to ruin, and makes one sick to behold. If there had once been a front fence, it was all awry; a part of the palings had been pulled out with which to beat the hungry cattle and hogs away from the door-yard; the

gate had its back broken, the posts were rotten and leaning in every direction, and the trees and shrubbery which the women had tended for many years, broken and despoiled!

Within the house, things were no better. The once elastic and cheerful wife, moved like a spectre about the rooms, haggard and thin, seeing her family sinking day by day lower and lower, while the farm that promised a permanent home, food and happy employment, was wasting away like a morning dew. These were no uncommon scenes, and the moral degradation which accompanied them was still more painful! Thanks to the philanthropic reformers,—who saw this evil and its tendencies,—for a happy change. Comparatively few of these appearances now meet the eye of the traveller. If a depraved appetite for stimulating drinks is indulged, it seeks that indulgence in a more retired way, and with many modifications which seem to alleviate the crime. This reform has undoubtedly changed the face of the country, and given the landscape a more cheerful and prosperous aspect. Let us see how things look, *now*.

Instead of the old-fashioned, square house, two stories high, with four or five large rooms on the ground floor, and an enormous chimney in the centre, with bricks enough to erect a citadel,—and only two or three rooms in the whole house so far finished as to be plastered,—a neat story-and-a-half, or two-story house, with one tier of rooms on the ground, is erected, and every part of it thoroughly finished. The cellar is well drained, the kitchen furnished with a bountiful supply of soft water, a cooking stove with which one person can perform as much service, as three could in former times, a good wood-shed is convenient, the house is painted inside and out, and most of the rooms papered. We do not mean to say that this is universal,—but it certainly describes the dwellings of the best farmers whom we saw. But the next class is greatly in advance of its condition thirty years ago. The new houses are smaller and better arranged and finished in every respect, while the barns are much larger, and there is an air of thrift, neatness and enjoyment about them, that were only exceptions to the general rule at the time to which we refer. These dwellings cost less than the old castles did, and are less expensive to be kept in repair, as the roofs—the most costly part of buildings—are fewer, and are constructed upon true principles which prevent rapid wear or decay.

Such are some of the evidences of progress in our farmers, in one direction,—*the dwellings in which we live*. When the mind, however, has been cultivated to advance to such a degree of perfection in this particular, it has received a quickening that will not allow it to rest contented

with a better dwelling only,—but its surroundings must be brought into keeping with it, and make the whole harmonize,—mind, dwelling and surroundings. So the fences are constructed with taste and precision, whether of stone or wood; shade trees are planted; rubbish of all kinds disappears from the door-yards, and a smooth and velvety lawn smiles in its place, kept even by grazing cows on their way from pasture to stall; a piece of land is set apart for *garden purposes*, into which a few hardy shrubs are introduced, with small fruits, asparagus and other esculents, and a variety of apples, coming into use from July to July. So far as *profit* is concerned, there is probably no investment of money and labor on the farm that yields so much,—for a skillful house-keeper will draw from this source and the pork-barrel a principal supply for the table for several months in the year. The *Garden* on the farm is one of the happy changes that has taken place, and was observable all along our route.

The cheerful influences of better buildings and productive gardens have developed a taste for the cultivation of flowers,

“Whose voiceless lips are living preachers,—
Each cup a pulpit, and each leaf a book,
Supplying to the fancy numerous teachers,
From lowliest nook.”

There is scarcely a farm-house now but has its flowers. In a little, tasteful garden, in the front yard, on the window-sill, or in pots on the gate-posts, a few hardy plants may everywhere be seen. They give a pleasant and cheerful aspect to the homestead, and greatly attract the attention of the traveller as he passes along. What their influence is—combined with the other changes already noticed—was immediately obvious upon entering dwellings and mingling with the family.

The first thing noticeable was a refinement of manners. A modest address and graceful self-possession generally assured us that we were cordially received into the circle. There was little restraint in the presence of a stranger, conversation flowed naturally, and with an elegance of expression, that showed greater advancement than any of the physical signs we have mentioned. The common schools, however, have had much to do with this. As an interesting conversation cannot flow from barren minds, it soon became apparent that a general education had been attended to, for wherever we conversed, we found State and National affairs were understood, and if, fortunately, literary or scientific matters were introduced, some one was present, able to speak with interest upon them.

A third thing noticeable was that of *dress*. We scarcely saw a slovenly and ill-dressed farmer in our whole travel. The dress of the men is plain and substantial,—and that of the women tasty and

becoming, with the exception of a rather too strong desire, everywhere, to bow submissively at the shrine of fashion! There is no hill so high, or hamlet so remote, no dwelling so humble, or means so restricted, in our rural population, that fashion does not find its devotees, and lead to some extravagances. A correspondent, in another column, states that the cost of the *imported* flowers for ladies' bonnets is greater than that of the railroad iron we use! We like to see people well clad; that is, that garments shall be well made of excellent materials, and properly fitted to the person. But the ear and nose-jewels,—the eighteen yards in the skirt of a dress,—the hoops two or three yards in diameter,—with whole rows of staring dahlias under the bonnet, and tiers of “bouncing bess” on top, we utterly eschew. A good bonnet used to cost \$5; a *good* one now \$15 to \$25. Upon the whole, however, our farmers dress better, all things considered, than they formerly did.

But the quality that crowns all the other graces to which we have adverted, is the sincere respect and regard for *religion*, which was everywhere manifested by those with whom we were so happy as to have much conversation. This gives assurance that the other virtues cited are based upon a permanent foundation, and will be handed down to generations yet unborn, to bless and exalt the race.

We are clearly of the conviction, therefore, that among the farmers of Massachusetts of to-day, there are

1. Less temptations to vice than formerly.
2. That their buildings are better.
3. They have better gardens, and a greater variety of wholesome food.
4. That the almost universal cultivation of *flowers* indicates a refined taste and higher intellectual attainments.

And that, consequent upon these, there exist—

1. Better education;
2. Better manners;
3. Better dress; and
4. More true religion.

Notwithstanding the cheerful views we have taken above, of the condition of the farmers in the western part of the State, we are sensible that these improvements have come with slow and feeble steps, and that they ought to be far beyond what they really are. In a future article, we may offer some opinions showing why the progress has not been still more decided and beneficial to the farmers of that region.

BOILED CORN FOR HOGS AND OTHER STOCK. — Wm. Van Loom, writing to the *Prairie Farmer*, says that he has practiced feeding boiled corn to

his stock and hogs, and is "satisfied that he saves one-half his grain, and gains as much more in time;" that one bushel of corn on the cob, boiled, will produce as much as two fed raw, and in one-half the time. In one experiment he fed three bushels of boiled corn, per day, to twenty-seven hogs, for ten days. The average gain was two pounds per day. He then fed the same lot of hogs on two bushels of raw corn per day, for twenty days—they gained a mere trifle over one pound per day. These were small, young hogs—larger ones would have fattened better.

For the New England Farmer.

THE BREEDING OF SHEEP.

MR. EDITOR:—I propose, in the present letter, to make a few remarks in regard to the breeding of sheep. There is no business that pays the farmer any better, at present prices, than the producing of wool. Domesticated sheep are of very ancient origin. We read in the good book that Abel was a keeper of sheep. Its inoffensiveness and mildness of temper, the value of its wool for clothing and the flesh for food, attracted the attention of the ancient patriarchs. Job's flock numbered fourteen thousand. In ancient Greece there were some very choice flocks. Sheep were introduced from Greece into the Roman Empire, and great care was taken to import the best breeds. The Roman historian informs us that sheep were sold sometimes for \$1000 apiece; so it seems that speculation ran as high in ancient times, as it does at the present day.

From Italy sheep were introduced into Spain; and a cross was effected between the choice breeds of Italy and the more robust sheep of Spain, which was the origin of the world-renowned Spanish Merinos. In the year 1801 some fine animals were imported into the United States; since then, large importations have been made at different times. Hon. William Jarvis, of Vermont, shipped 3,600 to this country from Spain, which sold at high prices. Later importations have been made, and great care has been taken to keep the Merinos pure; and I venture to say, that some of the farmers of Addison County, Vermont, have got as good sheep for producing wool as there are upon the face of this earth.

If I were to speak of mutton sheep, I should recommend the Leicester and the South Down, as best suited for that purpose. The breeding of sheep requires a great amount of care. The quality of the wool, the weight of the fleece, and the price it will sell for in the market, depends in a great degree on the care we take of the tender sheep. No sheep ought to be exposed to the raging storm in any season of the year, but all should have the protection of good sheds. Farmers who sell sheep for the highest prices, are those who take the best care of their flocks, and, when storms come, secure them under shelter. In the first place, procure the right breed, then take good care of them, and you are sure of success.

There is one subject which has not received the attention of farmers so much as it should—that is, the wool-producing properties of different articles of food. Experiments ought to be made, and the results published. White beans, peas and oats, are some of the articles of food, best adapted to the growth of wool.

Some of the farmers of this county have met with great success in improving their flocks; indeed, some think they have reached the top of the ladder, while others are determined to secure further improvement.

Many sheep are bred in this vicinity for the Western market. Prices range from twenty-five to one thousand dollars apiece. When speculation runs so high, it tempts some men to be dishonest, so a common grade sheep gets sometimes what they call the Cornwall finish, and is sold to the ignorant buyer for a full-blooded Merino. Buyers must look out for rascals, for it takes a sharp eye to discover their deception, when blacking and oil is put on in a scientific manner.

A few years ago, farmers thought that if a flock of sheep averaged four pounds of wool apiece, it was doing exceedingly well; but now, if they will not average from six to ten pounds of wool apiece, they are considered a poor flock. What makes the difference? We answer, the improvement of breeds, the protection of warm buildings, and the great care taken of them through the cold months, instead of letting them roam about the bleak fields in search of food.

OLIVER P. MEAD.

Middlebury, Vt., September, 1862.

PRICES OF WOOL.

In these times of change and remarkable incidents, the farmer should watch the course of events with care, and see if he cannot turn some of them to his own advantage. For instance, when he sowed his lands last spring, oats were bringing twenty per cent. more than they commanded for the last ten years—selling in small quantities at *sixty* cents a bushel, while good western corn was selling at *sixty-four* cents. Did the farmer observe this, and shape his crop accordingly?

Now, the great demand for woollen cloths of various kinds to be made up into garments for the soldiers of the army, has greatly increased the price of wool. At a recent sale in Philadelphia, various grades and sorts sold at the unusual prices of 15,000 lbs. at 75c.—10,000 at 77½—50,000 lbs. mixed at 65c. to 75c.—25,000 lbs. common, at 70 to 72½c.—15,000 ½ and ¾ blood, at 60c.—none selling for less than 55c., and all the lots for cash.

Will it not be well for the farmer to look at this matter, and learn whether there is not something to be gained by him in the great changes that are now taking place.

HEART-WORDS.—An old writer has truthfully remarked, that we may say what we please, if we speak through tears. Tender tones prevent severe truths from offending. Hence, when we are most tender at heart, our words are most powerful. Hence one great reason why our words have so much more power during a revival than at other times. Our hearts are more tender than they usually are—we feel more, and it is easy for the impenitent to see and feel that our hearts are interested in their behalf. They feel that our words are not mere lip-words, but heart-words.

For the New England Farmer.

HOW SHALL THE FARMER IMPROVE HIS MIND?

A correspondent of the *Farmer*, who writes excellent articles under the title "Retrospective Notes," regards my ideas concerning the cultivation of the farmer's mind as Utopian or impracticable. This is a pretty severe criticism, but as every production of the hands or brain must always go through a process of *sifting*, I may as well be resigned to the operation, and think myself well off if anything remains in the sieve after the shaking has ceased.

From his writings, I conclude that the author of the "Notes" is a man of extensive knowledge and experience. Will he inform his readers *how* he acquired this knowledge, and how he learned to write such interesting and valuable reviews? He should not withhold this information from the public; for, if every farmer understood his art as well, and could write as clearly and forcibly as our reviewer, there would soon be a great revolution and reformation in the farming community. I love to see an intelligent farmer or mechanic—one who is thoroughly acquainted, not only with the principles and practice of his own occupation, but has a knowledge of many other things, and a cultivated mind. Opinions differ as to the best means of acquiring this knowledge and culture, but it matters not how it is done, if the thing is only accomplished. Whether we are in the house with our children and friends; in a study, library, or room by ourselves; in the shop; in the field; or in the silent woodlands; there must *somewhere* be patient study and application, or no real progress will be made in self-improvement.

It has been said that a little knowledge is a dangerous possession. Must laboring men and women remain in total ignorance because they cannot, like Humboldt, compass the whole field of knowledge, and be able, like him, to write a "Cosmos?" I answer, *No*. Let them rather strive, by every means in their power, to reach so sublime an elevation, even if the difficulties of the way seem insurmountable. S. L. WHITE.

A CHEAP AND GOOD SMOKE-HOUSE.

A Western New York farmer publishes his plan of a small, cheap and good smoke-house, which, as it may contain some practical hints for our own readers, we append:

No farmer should be without a good smoke-house, and such a one as will be fire-proof and tolerably secure from thieves. Fifty hams can be smoked at one time, in a smoke-house seven by eight feet square. Mine is six by seven, and is large enough for most farmers. I first dug all the ground out below where the frost would reach, and filled it up to the surface with small stones. On this I laid my brick floor, in lime mortar. The walls are brick, eight inches thick, and seven feet high, with a door on one side two feet wide. The door should be made of wood, and lined with sheet iron. For the top I put on joists, two by four, set up edgewise, and eight and a half inches from centre to centre, covered with brick, and put on a heavy coat of mortar. I built a small chimney on the top in the centre, arching it over and

covering it with a single roof in the usual way. An arch should be built on the outside, with a small iron door to shut it up, similar to a stove door, with a hole from the arch through the wall of the smoke-house, and an iron grate over it. This arch is much more convenient and better to put the fire in, than to build a fire inside the smoke-house, and the chimney causes a draft through into the smoke-house. Good corn cobs, or hickory wood are the best materials to make a smoke for hams. The cost of such a smoke-house as I have described is about \$20.

EXTRACTS AND REPLIES.

COUNTY SOCIETIES.

I perceive that the Worcester County Agricultural Society, and some other societies, have determined not to award premiums for cattle the present year. I presume this is on the principle that when arms prevail, all other things must give place—in conformity with a classical maxim, that my memory fails to command. I am by no means certain they are not right in this movement. It is hardly possible to take hold with an active interest in the trifling engagements of an ordinary cattle show, when the more pressing wants of the country are calling aloud from every border of the Potomac and the plain of Virginia, and our brothers and sons are lying prostrate on these plains. If ever there was a time when *action* was called for, it is the present. Let every one who can shoulder a musket do so—and if he can't use a musket to advantage, let him take his pitchfork in hand, and go forth with a determination to effectually quell this rascally rebellion. I have no patience when I think of it, because there is no honesty, reason or propriety in it.

August 10, 1862.

OLD PUT.

GARGET IN COWS.

Please inform me through the *Farmer* what will cure the garget in cows. I have a nice cow but she is very much troubled with the garget—frequently gives curdly milk, and her bag swells.

Rockland, Aug., 1862.

J. PHILBROOK.

REMARKS.—What is called garget in cows is probably occasioned by colds or by some injury to the udder. We cannot prescribe a certain remedy. Bathing the bag in warm water is good to allay inflammation. A few drops of the tincture of *arnica*, in the water, will have a happy effect. The milk should all be drawn from the bag three times each day, and the cow kept quiet. If the milk become discolored and mixed with matter or with blood, the evacuations must be watched, and if it seem necessary, a dose of physic administered.

THE FLANDERS APPLE.

I send you a few apples, known in this vicinity as the *Flanders* apple, of the qualities of which you can be your own judge. I have, also, put a few potatoes into the bottom of the box, in order that you may test their qualities. In 1859 I planted the seed taken from the balls the fall previous, and obtained a few potatoes, the size of a hen's egg. In 1860 I planted my seedlings, and ob-

tained some that weighed ten ounces. In 1861 I had some that weighed 1½ pounds. The yield, last year, was nearly double that of the Davis Seedlings, planted side by side. These I send you grew in rather a shady place, the ground being manured only in the hill, yet they yield a bushel to sixteen hills. Planted about the middle of May. I know not what length of time is required to bring potatoes to maturity which are started from the seed, but infer from my experiment that three or four years, at least, is required.

J. S. ELLINWOOD.

Deering, N. H., September, 1862.

REMARKS.—The apples are excellent. The potatoes not yet tried.

SEEDLING GRAPES.

I have taken the liberty to send you a box of my seedling grapes. The reasons why I send them are these: The vine that produces them is very hardy; is cultivated in the open air, on the south-east end of my house, and it is a great bearer, and I think a very good grape.

South Randolph, 1862. N. E. HOBART.

REMARKS.—Received in good order, and found to be ripe, and quite sweet.

GRASS SEED FOR WET LAND.

Can you inform me through the *Farmer* what is the best kind of grass seed to sow on a wet, marshy piece of land? I have heard fowl meadow seed recommended. Can you tell me where I can buy that kind of seed, how much it sells for, and how much it is advisable to sow on an acre?

Hyannis, 1862.

F. H.

REMARKS.—The fowl meadow is an excellent grass for such land as you describe. It makes excellent fodder, being scarcely inferior to herds-grass, and yields abundantly on land suited to it. It will not flourish on land where the water remains late in the spring. We have never sowed the seed, but have been informed that four quarts is sufficient for an acre. There is but little sold, as it cannot be obtained, and commands a high price, as high, we think, as \$5 to \$6 per bushel. It can sometimes be found at the seed-stores in Boston.

ABORTION IN COWS.

As this is the season for feeding cows on green corn, please to re-insert the enclosed slip, which I failed to note in season. I recollect feeding smut with the corn to my cow, about four days before she slunk her calf, having entered upon her seventh month; she, however, has a good flow of milk, so I think it will be no great loss to me, as I keep but one cow; but the caution I hope will reach those who will, or might be benefited by it.

Franklin City, Sept., 1862. A. E. HOWARD.

ABORTION OR "SLINKING" IN COWS PRODUCED BY SMUT ON CORN.—The *Belgian Annals of Veterinary Medicine* states that the *Ustilago Madis*, or parasitic mushroom, which occurs on maize or Indian corn, as ergot does on rye, produces abor-

tion in cows fed with it. In a stable where cows were given corn with smut on it, eleven abortions occurred in eight days; when the cause was suspected, and the food changed, there were no abortions. Stock-keepers should make a note of this.

POULTRY KEEPING ON A LARGE SCALE.

MR. EDITOR:—I keep from 100 to 200 fowls, mostly of the Black Spanish breed, and keep them confined the year round, but disease is not known among them, and I can assure you that they do full as well as those kept by others who believe that fowls cannot do well unless they are kept scratching. My yard is only 25 by 60 feet, filled 12 inches deep with leached ashes and fine sand. I have a large box containing some 30 bushels of burnt shells and bones, which the fowls have free access to, and when the top becomes too dirty, I take it off and put it around my grape vines. My gardener raises 600 head of cabbage, annually, which is fed them through the winter, and in summer he gives them lettuce, all they want. I have a contract for 10 beef heads weekly, and give them plenty of sour milk, in additions to all of which they have free access to a mixture of corn, oats, wheat and barley, which is kept in a bin holding some 40 bushels, so constructed as to regulate itself, and not allow the fowls to waste a grain, or to scratch in it. My watering trough is also so constructed as only to admit the heads of the fowls, and is always full of pure, clean water, which is of more importance than anything else in keeping poultry healthy.

A barrel of lime, a bucket and a brush, are indispensable articles in a poultry house, and should be used every rainy day (and oftener during such a drought as we have had lately).—whitewashing everything but the floor, and using the lime dust on that. But wash the floor first. I have tried all your vermin preventives, and everybody's else, but never succeeded in keeping my fowls free until I found a remedy by experimenting.

The nests are so constructed as to be all taken apart in two minutes; they are perfectly smooth inside, and out, and once in every two months I have them taken down, cleanly washed, and then thoroughly coated with common whale oil, and have never yet seen a single louse near them, nor can one be found around my premises. The oil we apply with a common brush, and it can be relied upon as being a sure preventive against vermin on fowls.—*W. H. H., in Country Gentleman.*

TEA BRANDS AND THEIR MEANING.—The following will interest housekeepers: Hyson means before the rains, or flourishing spring, that is, early in the spring; hence it is often called Young Hyson. Hyson skin is composed of the refuse of other kinds, the native term for which is tea-skins. Refuse of still coarser descriptions, containing many stems, is called tea-bones. Bohea is the name of the hills in the region where it is collected. Pekoe or Pecco, means white hairs, the down of tender leaves. Powchong, folded plant. Souchong, small plant. Twankay is the name of a small river in the region where it is bought. Congo is from a term signifying labor, from the care required in its preparation.—*Scientific American.*

THE SEASON AND THE CROPS.

The summer which has just ended has been a moist one in all this region. No long and deluging rains have occurred, but showers have been so frequent that we had no dusty roads until about the 10th of September. Rain fell on the 2d and again on the 13th and 14th of this month; between those periods the sun was exceedingly hot for several days, which were followed by quite warm nights. It has not, therefore, been a decided *Indian Corn* season. On light, warm soils, however, that were highly manured, there will be a fine crop—while on the moist, heavy soils, it will be only a middling crop, though well manured and tended. At least, such is the case as far as our observation has extended.

Oats were excellent, and will bring an unusual price, in consequence of the great demand for them for the army horses.

Wheat promised well until the heads were formed, when it was attacked by a small insect, probably the *Thrips*, and most of it was ruined.

Barley proved a good crop, where it was not winter killed. We believe it a profitable crop, and that it should be more extensively cultivated.

The *Rye* crop was fair—on good land heavy.

Beans are excellent, and are in demand at high prices.

The *Potato* crop promises well; little is said of the rot, though it is occasionally seen. We hope that scourge has passed away. Potatoes are low in the markets, compared with the prices that have ruled for several years, previous to last year.

Apples and *Pears* are abundant, and unusually sound and fair. Porters are selling for 75c. to \$1.25 per barrel. Bartlett pears very low, say from 50c. a bushel, up, according to quality.

There are very few *Peaches* of New England growth, but plenty from the Middle States, such as they are—all plucked before they are ripe, and of course, without the delicious peach flavor, which is their prime quality.

Plums, in variety, are plenty.

Grapes are abundant, and will be good if they get ripe.

The *Cranberry* crop will be light—not one bushel where there were ten last year.

Generally with farmers, the season has not been favorable for vines, *pumpkins*, *cucumbers* and *squashes*, but those who make it a specialty to raise them have succeeded, and there will be a plentiful supply of the two last.

The first *Hay* crop was good, and the second also, on new, rich land.

What *Buckwheat* fields we have seen did not promise well; this crop, however, is not a leading one hereabouts.

On the whole, there is abundant reason for our most grateful acknowledgments to Him who con-

trols the seasons and gives us the increase of the fields. The farmer may find for a time that his products will command but a moderate price, while the articles that he is obliged to purchase will be high. But as he cannot control the great events which induce this state of things, he must economize a little, call in to his aid an unusual amount of patience and philosophy, and press on as ever in *his line of duty*, and *all will be well*.

RAIN ON THE ROOF.

When the humid shadows gather

Over all the starry spheres,

And the melancholy darkness

Gently weeps in rainy tears;

'Tis a joy to press the pillow

Of a cottage chamber's bed,

And listen to the patter

Of the soft rain overhead.

Every tinkle on the shingles

Has an echo in the heart,

And a thousand dreamy fancies

Into busy being start;

And a thousand recollections,

Weave their bright hues into woo

As I listen to the patter

Of the soft rain on the roof.

There in fancy comes my mother,

As she used in days ago;—

To survey the infant sleepers,

Ere she leaves them till the dawn.

I can see her bending o'er me,

As I listen to the strain

Which is played upon the shingles

By the patter of the rain.

Then my little seraph sister,

With her wings and waving hair,

And her bright-eyed cherub brother,

A serene, angelic pair,

Glide around my wakeful pillow

With their praise or mild reproof,

As I listen to the murmurs

Of the rain upon the roof.

Then another comes to thrill me,

With her eyes delicious blue;

I forget as gazing on her

That her heart was all untrue;

I remembered that I loved her

As I ne'er can love again,

And my heart's quick pulses vibrate

To the patter of the rain.

There is naught in art's bravuras

That can work with such a spell,

In the spirit's pure, deep fountains,

When the holy passions swell,

As that melody of nature,

That subdued-subduing strain,

Which is played upon the shingles

By the patter of the rain.

Exchange.

LEGISLATION ON THE CANADA THISTLE.—At the last session of the Pennsylvania Legislature, a law was passed to prevent the spread of the Canada thistle. "Hereafter, any individual or corporation in that State, allowing the Canada thistle to ripen on his or on their premises, shall be liable to a fine of ten dollars, upon each complaint that is properly established; and any one who may fear the spread of the Canada thistle upon his premises

from the lands of his careless or thriftless neighbor may, after five days' notice, enter upon any land where the weed is found growing, cut it, and recover full costs for the labor and trouble."

For the New England Farmer.

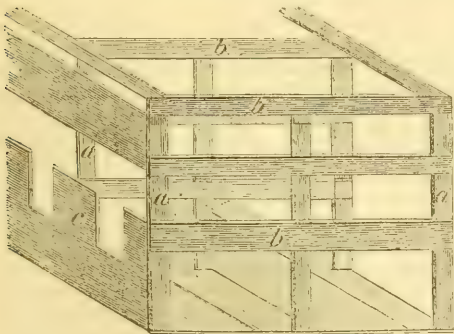
PLAN OF A SHEEP BARN AND FEEDING RACKS.

MR. EDITOR:—I send herewith the description of Mr. R. W. TOBY's sheep barn, which I promised you sometime since. I find it somewhat difficult to give an intelligible description of it, but if you and your readers are willing to use a goodly quantity of Job's especial virtue, I think I can, "after a time," make the thing plain.

The barn, or more properly, perhaps, stable, is a building 50 feet by 16; the west end joining the barn from which the sheep are foddered. The posts are 14 feet in length, the first seven feet being used as a shed for cattle, with the exception of 12 feet of the east end, which contains a hen-roost, &c.

Over these is the stable, occupying the whole extent of the building. The floor is of inch boards lined with half-inch. On each side are four windows, for the double purpose of admitting light and for ventilation. Through the middle is a space 4 feet in width, extending from the west end to within about 3 feet of the east end; in this space the sheep are fed. On either side of this is a row of stalls of the same length, and outside of these, between the back ends of the stalls and the sides of the building, on each side, a space 2 feet 10 inches in width. The east end of the middle, or feeding space, being boarded up, it leaves an alley nearly 3 feet wide, on both sides and across the east end, which the sheep have entirely to themselves.

Inclosed is a rough sketch which may aid somewhat in giving a correct idea of the stalls; and as it is in these that the "*peculiar peculiarity*" of the stable lies, I take the liberty to send it, hoping that you may see fit to use it in connection with



this. The floor under the stalls has a slight slant, being raised an inch and a half at the front by means of wedges sawed off the proper shape and laid upon the sleepers.

The stalls are 3 feet 2 inches long, and 16 inches, clear, in width. The uprights, *a a a*, are of inch spruce, 2 feet 8 inches long and 2 inches wide; on each side of these the strips which form the sides of the stalls are nailed. These strips are

of half-inch bass-wood, the side next the sheep being planed; the bottom ones are 4 inches wide and are placed 10 inches from the floor; the others are 3 inches wide, leaving the two upper spaces 6 inches each.

In front is an elm board, *C*, 16 inches wide, and above this a spruce board 6 inches wide, the space between being 6 inches.

Across the tops of the front uprights is a strip 3 inches wide nailed firmly to each one. Across the back ends of the stalls is a piece of 2 by 3 scantling let on the tops of the uprights about an inch, for the purpose of strengthening this part of the work. In the board *C*, in front of each stall, is a notch 6½ inches wide and 9 inch deep; the board is so wide that a sheep cannot eat from the floor without placing his neck in this notch, and you will see at once that while it is here he cannot materially interfere with his neighbor's business. The six-inch space between the two front boards is for the accommodation of horned sheep; a sheep, while his head is at about its natural height, can readily pass it through this, horns and all.

Sliding upon the back uprights and held in its place by cleats, is a board some 4 inches wide, so arranged that it may fall to within about 13 inches of the floor, or be raised to the top of the standards, by means of a cord passing over the scantling above it, to the front of the stalls; these boards are 12 feet in length, so each one closes eight stalls. The sheep are not usually confined to the stalls except while feeding grain, then it becomes necessary, or at least very convenient, to have them so. Every farmer knows that if he has a sheep that is a little weakly in the fall, (and every large flock will have such,) it will, from the very fact of its weakness, keep continually growing weaker, unless he separates it from the larger and stronger sheep. Now this arrangement must, I think, almost entirely obviate difficulties of this nature; one sheep has just as good a chance as another, for there is no such thing as crowding a weaker one from his place at the rack. And if you have a sheep that is not doing quite as well as you would like, you have every facility for increasing his feed.

At the time this stable was built, it was intended more particularly for fattening sheep; but Mr. Toby tells me that from what experience he has had with it, he has not the least doubt but that store sheep would do enough better with the same amount of feed, saying nothing about the increased ease of management, to make the thing pay with any farmer having fifty or more to winter.

It is an old, but I think now nearly exploded notion, that sheep do not require water. But any one still skeptical on this point would have all his doubts removed by watching Mr. Toby's flock a short time, and be obliged to acknowledge that, so far, at least, as a love of water is concerned, sheep are not constituted materially different from other animals. They have free access to water, and scarcely five minutes passes while they are eating, but that one or more will come down, take a few swallows, and run back to their feed.

Well, says my economical friend, this is all very nice if a man only has the "wherewith," but it is altogether too much like English farming to be of any practical use to us poor farmers.

But wait a moment; an excellent old maxim tells us to "look before we leap," so we will examine

the cost a little before we jump at the conclusion that it must be very great. I find that, constructed as Mr. T.'s are, fifty stalls (his stable contains sixty,) would require,

68 feet of inch spruce for standards.
83 feet of $\frac{3}{4}$ -inch spruce.
135 feet of $\frac{1}{2}$ -inch bass-wood for partitions.
100 feet of inch elm.
40 feet of 2 by 3 scantling.

Any one having the curiosity so to do, can carry out the items to suit the price of lumber in his particular locality; in this vicinity we consider it worth but little more than the drawing and sawing. We find that it requires some 450 feet of stuff for fifty stalls, but from this we ought, perhaps, to deduct the fourth item, and some 40 feet of the second, as these make the hay-rack, and this we should be under the necessity of having if we dispensed with the stalls. The work of construction is not great, and, thanks to our circular saws and planers, it costs but little to reduce the lumber to the proper sizes.

Should any part of the above description appear "misty," I will, upon due notice, gladly strive to dispel the gloom.

JAKE BOMSTY.

Calais, Vt., 1862.

REMARKS.—This article was received sometime since, in response to a request which we made last winter for some of our friends to send us plans or descriptions of their sheep barns and feeding racks. We have already given one or two that were early received, reserving this for the present use. Our obliging correspondent will please accept our thanks for his kindness in furnishing it. The engraving has been made especially to illustrate his description.

IMPROVING OLD PASTURES.

At an agricultural meeting in Cheshire, England, Mr. Richard Dutton read a paper on the "Agriculture of Cheshire," in which he remarks: "An old pasture-field, rich in good herbage, should never be brought under the plow, on a dairy or grazing farm, without an urgent necessity. On our best dry soils, old pastures are apt to become rough, and in some cases covered with moss. This may be prevented, to a great extent, by a top-dressing of salt, during the winter, at the rate of 10 cwt. per acre; or, in some cases, a good dressing of lime, at the same time freely harrowing the surface; or, what is less expensive, stocking with sheep, during the winter months, at the same time feeding them with turnips or corn. In a very productive summer, or when a farmer has been unfortunate with his stock, he may with advantage mow such parts of his pastures as can be spared for the purpose. It is superfluous for me to say that, on a very large portion of our grass lands, draining and bone-dusting are the great means of improvement. A question of some importance may be asked: 'Are all our clay soils improved by draining for mowing and pasture purposes?' I think not. When there is nothing in the herbage produced which indicates the presence of too much water, I think draining will add nothing to the fertility of such soils, so long as they are in grass."

For the New England Farmer.

THE PURSUIT OF KNOWLEDGE UNDER DIFFICULTIES.

MR. BROWN:—Your correspondent of August 30 contributes an article "About Natural History." On reading it, I found it to be "about it," rather than it, "Natural History." His first remark, after "due acknowledgments," is, "he," meaning "a Farmer," "has been unfortunate in his acquaintance with pundits." True, indeed, Mr. Editor, and who has not, that has had any experience at all either in consulting *pundits*, or reading what they publish. Your correspondent then adds, "he, (meaning myself,) seems to have shown as little judgment when seeking information of a *scientific botanist* as to the *qualities and uses* of plants, as he would in going to a tailor for a new set of wagon harness." His statement is as singular as it is remarkable, Mr. Editor; at least it seems so to a plain man like me. "As soon ask a tailor to make a new set of wagon harness," as to ask "a scientific botanist" concerning "the qualities and uses of plants." What is the province "of a scientific botanist," pray, if "the qualities and uses of plants" are to be wholly excluded therefrom, as much as harness-making is from the province of a tailor? "Quality," the very nature and property of a plant, is declared to be as far removed from the investigations "of a scientific botanist," as harness-making is from making trousers. Such a botanist, Mr. Editor, is a good representative of that class of *pseudo* scientists, that I call *pundits*.

Exclude a knowledge of both "the qualities and the uses of plants" from the province of the botanist's investigation, and what is to guard him from handling poisonous plants, and suffering therefrom? So of seeds and fruits that have an edible look, yet are deadly poisons when taken into the stomach. But according to your correspondent's statement, a botanist is to concern himself about none of these things, and I, for asking a botanist for such information, am charged with showing "as little judgment" as a man would, who should go to a tailor to get wagon harness made. If such be the interpretation of "a scientific botanist," as he is of whom I sought information, then I no longer wonder that I got the answer I did. According to this definition of a botanist, as I apprehend it, after considering your correspondent's forcible comparison to show me devoid of "judgment," then, to be a carpenter, all that is requisite would be to name correctly all the tools in a joiner's chest. But according to my plain way of thinking and saying, it is not only necessary to know the names of the tools, but the qualities and use thereof, to be a carpenter. So of botany, as I have been in the habit of looking at it; a man is not a botanist who can call a few hundred or thousand trees, shrubs, flowers and weeds by name, by the Latin lingo, if you please, but rather he who knows the structure, function, "qualities and uses of plants." A knowledge "of the qualities and uses of plants," I deem as essential to the character "of a scientific botanist," as the apostle Paul does charity to the character of a Christian. But I must pass on.

This prepared the way for me readily to believe that your correspondent is still lingering among those who regard a lobster as an insect; and like a modern student I referred to, he would also

teach most likely, had he the opportunity, that a Crustacean is an insect. Is this according to the teaching of the late Dr. Harris? Perhaps your correspondent can tell.

But again; your correspondent says, "A Farmer cannot have read the papers when he says he learned nothing from pundits about the army worm, palmer worm, the grain aphid," &c. He did read the papers, but alas! he was constrained to say that words without knowledge reflected no light upon his pathway, any more than upon that of his neighbors. It was said by these pundits that "the army worm would be common this year, and every year." Is this so? Said another, "The grain aphid will not appear this year." Has this prediction proved true? Let those who have suffered from its visitation answer. Who has destroyed the grain aphid, and what was the remedy? So of the army worm and palmer worm. Perhaps your correspondent will inform me, and in doing so, many others also through your columns, who would like to know how to keep off these vermin from summer crops.

Concerning my inquiry about birds and caterpillars, your correspondent says, "I will answer in as simple language as possible, lest I fall under the displeasure of 'A Farmer,' and wherever a scientific (systematic) appellation (name) is used, will also give its equivalent in plain English." Thank you, good sir.

Then he mentions the golden robin and the common robin, the latter of which he says, "I have seen during an hour, carry *twenty* caterpillars of the *Bibio albipennis*, or stout-built, white-winged gnats, one of the most injurious insects to the grass crops." "Caterpillar, or stout-built, white-winged gnat." Which? No "plain English" here, as it seems to me. He then adds, that he saw a robin carry *five* caterpillars of the *Agrostis tessellata*, which signifies the 'checkered rustic.' What signifies the checkered rustic? *Agrostis* or *tessellata*, or both? Also, "one huge caterpillar of the *Ceratomia quadricornis*, which means the four-horned hawk-moth, *with horns on the shoulders*." This is lucid, undoubtedly, to a pundit, but to me, it is a lingo quite unintelligible. "A four-horned hawk-moth, *with horns on the shoulders*." A sparrow, he adds, has been found to destroy 3000 insects a week, while breeding (?), including caterpillars, flies, beetles, bugs and other *perfect* insects." Is a caterpillar an insect? Farmers in my vicinity do not regard worms and caterpillars as insects. But I suppose we are all wrong. I should like to know however, whether a worm and a lobster are set down as insects by Prof. Agassiz.

Finally, your correspondent adds, "I made no 'offer *gratuitously* to teach' a farmer." That was my inference, from his own words; after telling a long story about a minister, and how he taught his parishioners about insects, he concludes by saying, "In like manner, (as did the minister,) I, *who am* but an humble student in the vast field of natural history, may be able to contribute my mite in the form of facts, &c., about insects, *and shall be happy to give our friend 'Farmer,' and others, any information in my power* in return for their *experience* (?) in the same subject." I think this language fully justifies my statement touching this point.

I have no "experience" to relate on insects, and but little observation of any value. I will, how-

ever, in reply to a question, quote the statement of Dr. Hay on the woodpecker, one species of which he says "sucks the sap, and eats the inner bark of ornamental and fruit trees, which are thus killed." As for my "name and address," asked for, I have to remark, they are not of the slightest consequence to your correspondent. It is the subject of inquiry, what is said, and not who says it, that concerns him and the readers of the *N. E. Farmer*. My *cognomen* indicates the very numerous and respectable family or class of which I am a humble member, who is content to subscribe himself a FARMER.

THE VERMONT STATE FAIR.

The Vermont State Fair was held at Rutland, on the 9th to the 13th inst. It is its twelfth anniversary. The weather was favorable, and in strong contrast with the stormy opening last year. The attendance on the first day was considerably larger than for some years past. The handsome grounds of fifty acres where the fair is held, about half a mile south of the town, the admirable trotting course and comfortable seats erected opposite, and the convenient halls, "Floral" and "Mechanics," have all been described on the occasion of former fairs. Mr. GEORGE CAMPBELL, of Westminster West, was present with some of his excellent sheep, among which was a four years old Buck that he has refused \$2000 for, for the reason, he says, that it is worth \$5000 to him for stock purposes.

Wool Growers' Convention.

The most interesting event of the first day was a convention of the Vermont Wool Growers, held in Mechanics' Hall, on the Fair Grounds, under the auspices of the State Agricultural Society. Edwin Hammond, of Middlebury, President of the Society, was Chairman, and Daniel Needham, of Hartford, delivered an appropriate address, which it was voted to issue in a pamphlet form.

Important matters connected with the raising of wool and mutton were ably discussed at the conclusion of the address by Solon Robinson, of the *N. Y. Tribune*, Judge Colburn, of Springfield, Vt., David E. Nicholson, of Wallingford, Mr. Marsh, Mr. Lester, and Mr. Cushing, of Woodstock, and others.

The principal subjects of comment were the best means of preparing wool for the market, the improvement of stock, with reference to producing the largest amount of wool at the least possible cost, and the best method of curing wool for the market.

Mr. Robinson did not favor the washing of wool by the farmers, for it can be done by a chemical process by the manufacturers so much cheaper that they will not pay the wool growers for their trouble. The war, he said, creates a scarcity of cotton and a demand for wool, and there is also a great demand for mutton, therefore, the raising of these staples cannot be otherwise than profitable in Vermont. He did not speak favorably or otherwise of any particular breed of sheep, but he thought Southdowns could not be kept profitably in flocks exceeding from one to two hundred head.

Mr. Nicholson did not favor the raising of sheep

to the exclusion of other stock, although he knew it to be profitable from experience. He thought a stringent dog law was necessary for the protection of sheep growers. Here followed some lengthy remarks concerning the washing of wool before shearing, in which the speakers generally concurred in the belief that such a process was not profitable to the growers, inasmuch as manufacturers pay as much for oily and unwashed wool as they do for clean dry wool. Resolutions presented by Mr. Needham, asking the Legislature to enact a dog law, and resolving to hold meetings each year of the fair for the discussion of wool and sheep matters, were passed, after which the convention adjourned.

The Second Day's Exhibition.

The stock and articles on exhibition were more numerous, and the attendance much larger than on the first day. A pretty good idea of the number present may be inferred from the fact that there were \$350 worth of tickets sold at twenty-five cents each, and there was a very large number of exhibitors who were admitted by passes. In the horse department there were no entries for the sweepstake premium of a diploma and \$50, but there were numerous others as follows: Sherman Morgans, stallions, 12; mares, 6; Woodbury and Bulrush Morgans, stallions, 8; mares and fillies, 3; Hambletonians and other bloods, (including all bloods not previously mentioned) stallions and mares, 33; matched horses, 24; geldings and mares, 4; foreign horses, 2. There were only two entries of cattle for the sweepstakes premium of \$25, which will probably not be awarded, as the rules of the society require that there should be at least three competitors. Of Durhams there are nine entries, Devons, one; mixed and native bloods, 16; working oxen, 9; steers, 3; fat cattle, 1; and of foreign cattle, none. There were four entries of sheep for the sweepstakes premium of \$25; and of Spanish merinos the entries were bucks and ewes, 28; lambs, 16; ewes (stock of twenty-five) 4; long and middle wooled, 9. The premiums are to be awarded with reference to the combination of the best carcass for mutton, and fleece for manufacture. There were 5 entries of swine, and 8 of poultry. The productions of the dairy comprised 3 entries of butter and 6 of cheese. The other entries are—field crops, 3; fruits, 6; maple sugar, 7; vegetables, 4; mechanical department, first class (including farm implements and machinery,) 24; second class (including all other manufactures,) 18; floral department about 200.

Opening of the Third Day.

The weather was very fine, and the people fast gathered upon the grounds. Amusements were liberally provided for all, so that all could find enjoyment, leaving no temptation for any to become noisy and troublesome.

Mr. Greeley's Address.

There were 8000 people upon the ground to listen to the agricultural discourse of Hon. Horace Greeley, of New York. Nearly two-thirds of the male population in attendance were professional farmers, and the gathering together of a more intelligent appearing class of men is seldom witnessed. It is well known that Mr. Greeley is exceedingly popular in this vicinity, having been a resident of the county in his early youth; and possess-

ing a natural taste for agricultural pursuits, he was probably the most appropriate man to address his admirers upon the subject.

The chosen topic of his discourse was "Agriculture in Vermont—Past and Future." At the commencement he gave some personal facts, and related the backwardness of everything pertaining to agriculture half a century since. More than forty years, he said, have passed since I, a mere child, a portion of the family and scanty worldly possessions, all contained in a double sleigh, of a poor and unsuccessful New Hampshire farmer, passed through the town and halted in this county, with our faces turned toward that great West, which was and is the bounteous and hospitable "land of promise" for the destitute and unlucky. For the next ten years this section was my home; for the first five of them my time and my energies, such as they were, were devoted to clearing away timber and tilling the soil. During those five years, though a most omnivorous reader, hunting far and wide for mental aliment, I never saw an agricultural book, and I think not even a single copy of a periodical devoted to farming. I did not hear nor even read an address or a speech whereof agricultural improvement or agricultural method was the theme. I did not hear of a Vermont State nor Rutland county fair. A town fair, or a town, village or neighborhood meeting of farmers to discuss agriculture as a pursuit, or interchange ideas and suggestions concerning their own vocation, was never thought of in the varied circle which bounded my daily life. If it had been suggested to my neighbors and daily associates that agriculture was a pursuit requiring for its wise and effective prosecution a very large measure of general knowledge—that it was a science demanding a profound acquaintance with and accurate knowledge of nature—of geology, chemistry and botany—I am confident the most of them would have been as thoroughly astounded as if they had been urged to send their oxen to college and take their horses to hear a course of lectures on astronomy.

The agriculture by which people managed to exist at that time in this vicinity was sheep and grass, and they did not, and Mr. Greeley presumed they do not now, grow as much grain as they consume. The clay flats of Westhaven, as good grass land as ever was, did not average a ton to the acre, and some not half a ton, for the reason they had been regularly mowed for forty years and pastured usually from September to May, and never fertilized in any manner. Rye was the staple grain, but there was not enough raised to supply the people with bread and whisky, which by many were regarded the prime necessities of life. Many fields were sowed with this unexhausting grain, without fertilizing, until they did not yield five bushels to the acre, although there was lime and other fertilizers protruding all around. In some of the townships east and north of Whitehall the annual products were so diminished that the inhabitants had only a choice between emigration and famine.

The last forty years, however, have witnessed great improvements in agricultural methods here and almost everywhere else. In spite of the too general sluggishness and inhospitality to new ideas of the class of poor farmers, certain cardinal truths have forced their way into the general mind and will not be dislodged. Among these Mr. Greeley

reckoned as important that *no man can afford to keep indifferent stock, or to keep good stock poorly*. He did not mean to touch the rival merits of certain herds of cattle, for some bloods are good in certain localities and some in others. He favored ten or twenty generations of careful breeding and generous feeding, and also good shelter. It is a sound general rule, with few exceptions, that *no man can afford to grow poor crops*, and all farmers that do grow them invariably grow poor themselves. Neither can a man afford to bring up his children in ignorance of the principles and facts which underlie successful farming. Mr. G. thought our popular education defective in plan and scope, although the idea might not be locally applicable. All branches of education he considered worth having, but insisted that there were some not taught that would be better than some that are. He would change this by choosing for the principal reading-book in every common school, a condensed statement of primary truths bearing on agriculture, like that recently compiled for Massachusetts by Messrs. Flint and Emerson.

Draining and manuring land was dwelt upon at considerable length and with much enthusiasm, although the farmers were cautioned not to fail through excesses. Farmers should produce their own manure, and avoid sending to the cities for phosphates. He told them to save bones of every kind, and apply them speedily to the farm; grind them in a mill if you can, dissolve them in diluted sulphuric acid, mash them with the beetle on a rock or barn floor, if that is the best you can do, but let not a bone be lost.

In the evening of this day, Mr. GREELEY addressed the people upon political matters. He was urgently requested to do so in connection with his address, but very wisely refused to do so.

Fourth Day---Sept. 12.

The premiums, which were announced to be awarded yesterday, were necessarily postponed until to-day. The amount usually paid in premiums in former years has been about \$3000; but this year scarcely \$2000 was appropriated for that purpose. The delay in awarding yesterday was occasioned by the slackness of the committees in handing in their reports, and the imperfect manner in which they were made out, many of them omitting the names and residences of competitors, &c. The leading premiums in the important departments are: on Sherman Morgan horses, F. Griswold, of Randolph; three year old colts, E. F. Jackson, of Pittsfield; one year old colts, Lester Fish, of Ira; five year old stallions, Lionel Udall, of Hartford; mares, C. H. Stowell, of Cornwall; fillies, G. B. Cannon, of Burlington. There was no sweepstakes premium awarded to cattle, but on Devons the first went to C. B. Cook, of Wolcott; mixed and native bloods, two year old bull, James A. Shedd, of Burlington; bull calf, James Ray, of Bennington; cows, James A. Shedd, of Burlington; two year old heifers, John Ingraham, of Rutland; breeding cows, Lorenzo Ray, of Bennington; working oxen, W. H. H. Barker, of Shrewsbury; steers, three year old, J. M. Winslow, of Rutland; two year old, William S. Allen, of Panton; one year old, Bradley Gorham, of Putney; milch cows, Daniel Kimball, of Clarendon. Sheep—Spanish merino ewes, five in pen,

George Campbell, of Westminster West, to whom was also awarded the sweepstakes premium of \$25 for the best buck; yearlings and lambs, A. A. Saxton, of Walpole; three year old and one year old bucks, George Campbell, of Westminster. Swine—boar, J. M. Hall, of Rutland; litter of pigs, H. W. Lester, of Rutland; breeding sow, Thomas Stewart, of Clarendon.

Circumstances prevented our accepting the invitation of the officers of the Society to be present on this occasion, and this account of the show is compiled principally from the quite full reports to the *Boston Journal*.

For the New England Farmer.

THE FETTERED MIND.

MESSRS. EDITORS:—Fetters are applied to the corporeal appendages of criminals, unruly animals and maniacs, as restrictions against trespass and mischief. The intellects or minds of men may wear fetters as well as the corporeal parts. When the reflecting man takes a view of his fellow-mortals spread over the earth, and sees the huge proportion of fettered minds, fastened by ignorance and prejudice to old customs and creeds, he will be filled with wonder. There are many farmers in this country, who already possess ample knowledge, in their own estimation, and have no room for more, very good men in their way, but are fettered against progress and improvement; they are as certain that they are right as a sectarian minister; such farmers may raise a great deal of produce, and be good men in society, but still wear the fetters of prejudice against any variations from their former customs.

Physicians are liable to do a great deal of mischief from the same cause; they are fettered to medical writers of the most profound nonsense and absurdities imaginable. Young physicians, of little experience, are apt to trust in books, written by superficial theorists, who have no practical knowledge of the subjects they write upon, any further than to make an attractive, saleable book which will command a good price. When I commenced the practice of medicine I was fettered to my medical books; they disappointed me. I broke my fetters and cast them away, and took the privilege of thinking for myself, to what purpose, I leave to my customers to decide. I do not mean to include all medical books in the category of deceptive trash, for, thanks to God, we have medical writers of true probity, experience, science and ability to write a good book. Ancient medical writers were fettered to their predecessors, whoever they might be; and therefore the fettered minds of medical writers copied the works of their "illustrious predecessors," down to a late century, as infallible, before unfettered, independent minds began to take the lead.

Another class of fettered minds are those who are bound to support a creed. Why will rational men bind themselves to a creed, right or wrong, and shut the bars to all progress or improvement? Such ones are doubly fettered, if they live to see errors and fallacies in the creed to which they have subscribed, and have honesty and independence enough to reveal the fact; ten to one if they do not lose their places, whether in the pulpit or

any other place where bigotry rules, and they may consider themselves fortunate if their characters do not suffer as much as their pecuniary interests do.

SILAS BROWN.

North Wilmington, June, 1862.

REMARKS.—We have taken the liberty to omit a portion of the article sent by our esteemed correspondent, not because we do not believe every word he says, but because it might introduce a discussion entirely inconsistent with our purposes and plans in the *Farmer*.

For the New England Farmer.

THE ONLY "LADY-BIRD" INJURIOUS TO VEGETATION.

The habits, food and transformations of insects are so uniform and constant as to have given the foundation for their division into orders, families, genera and species, some feeding entirely upon other insects, others upon decaying vegetable or animal matter, and others still upon living vegetables. But as in every other subject there is no rule without an exception, so it is here. The "lady-birds," as they are commonly called, or *Coccinellidae*, are a very extensive family, numbering several hundred species in the world, of which between twenty and thirty have been found in Massachusetts. All of them that have been studied, and their habits ascertained, are found to be carnivorous, or innoxious to vegetation, with the single exception of the large and handsome species, a cut of which graces this article. It is known as the *Coccinella borealis*, or northern "lady-bird," and is found to be very injurious to the squash and other cucurbitaceous plants; laying its eggs upon the under side of the leaves, a small yellow grub or larva with six feet, and of a rounded form is hatched from them, and proceeds at once to devour the parenchyma or pulpy substance of the leaf; it is a delicate feeder, rejecting the veins and tough nerves of the leaf, so, that it presents a net-like appearance, somewhat like coarse lace, and can readily be distinguished from the ravages produced by the other enemies of the plant. The perfect insect in its beetle form is also believed to injure the leaves in the same manner. Sprinkling the plants thickly with ashes or fine gritty dust, such as accumulates in the grindstone box, or even common road dust, is said to be an excellent remedy, if applied when the dew is on.

F. G. SANBORN.

Andover, 1862.

NEW PUBLICATIONS.

NEW MANUAL OF HOMŒOPATHIC VETERINARY MEDICINE; or the Homœopathic Treatment of the Horse, the Ox, the Sheep, the Dog and other Domestic Animals. By F. A. GUNTHER. Boston: Published by OTIS CLAPP, 3 Beacon Street, Boston.

The introduction of Homœopathic medicines has greatly modified the Allopathic treatment of both men and animals. Many of our best veterinary surgeons have long availed themselves of the agreeable and efficacious homœopathic remedies, and have used them in their practice and recommended them in their books. Even if they

had no power in themselves, they have wrought a good work in preventing the horrid and torturing prescriptions which were so common forty years ago. Thanks for so much. And if the poor horse could speak, we should find an eloquent gratitude surpassing that of human tongue.

We hope this book will have a wide circulation. By using it, we have no doubt horse-owners will find there are remedies for the diseases of the noble animal beside gin, spirits of turpentine, red-hot irons and the seton. Beside their inherent power, these medicines have another recommendation in the ease with which they may be administered.

NEW HAMPSHIRE FRUIT CROP.—The crop of apples and pears is exceedingly large this year, and the price so low that there will be plenty of cider and dried apples made. Along the road, almost anywhere, you will see many trees propped up, and some limbs broken down.—*Manchester American*.

LADIES' DEPARTMENT.

WORDS FOR WIVES.

I believe the influence of a wife to be always, for good or for bad, very decided. There is not a woman living, unless she have forfeited all claim to her husband's respect, but is making her mark day by day upon his character. We men are foolishly proud, and do not like to let the women see how they influence us, but we know that, outside of our business, and sometimes even in it,—all our doings are more or less controlled by our wives, and he is a knave who will not honestly own it. Is it a disgrace to a man that he is kept at home, away from bad company, away from doubtful pleasures and foolish expense, through his wife's influence? Some poor, cowardly souls think so, and utter senseless cries against her who, as a guardian angel, stands between these and their victim. I think the wife was given to man to supply him with certain things wanting in his own nature, and in yielding to her judgment, her opinion, her desire,—where these are on the side of truth and justice,—he only follows out the leading of a Divine will. But though the husband hide it or deny it, let the good wife be of good cheer. One thing, however, let her understand,—worrying, fretting, fault-finding, direct and frequent harangues, ill-tempered slurs, anything that looks like passion, suspicion, or jealousy, will do no good. These are things a man cannot bear, and have driven many into the things they were intended to prevent. She lacks judgment and prudence who shall ever indulge in these. Let her know that the strongest influences are those which are silent and indirect, that it is impossible for her to be in the right, gently, patiently, consistently, without its being felt. It may not be acknowledged to-day, or to-morrow, or ever; it may not do all that she hoped it would do. Counteracting influences may be too strong for that, but it is felt among the deepest and last things of life, even when he jeers, and scoffs and strikes.—*Monthly Religious Magazine*.

ABOUT COOKING POTATOES.

POTATOES BOILED.—Wash them, but do not pare or cut them, unless they are very large. Fill a sauce-pan half full of potatoes of equal size, (or make them so by dividing the larger ones,) or the small ones will be done to pieces before the large ones are boiled enough, put to them as much cold water as will cover them about an inch; they are sooner boiled, and more savory, than when drowned in water. Most boiled things are spoiled by having too little water, but potatoes are often spoiled by too much; they must merely be covered, and a little allowed for waste in boiling, so that they may be just covered at the finish.

Set them on a moderate fire till they boil; then take them off, and put them by the side of the fire to simmer slowly till they are soft enough to admit a fork, (place no dependence on the usual test of their skins cracking, which, if they are boiled fast, will happen to some potatoes when they are not half done, and the insides quite hard.) Then pour the water off, (if you let the potatoes remain in the water a moment after they are done enough, they will become waxy and watery,) uncover the sauce-pan, and set it at such a distance from the fire as will secure it from burning; their superfluous moisture will evaporate, and the potatoes will be perfectly dry and mealy.

You may afterward place a napkin, folded up to the size of the sauce-pan's diameter, over the potatoes, to keep them hot and mealy till wanted.

This method of managing potatoes is in every respect equal to steaming them; and they are dressed in half the time.

There is such an infinite variety of sorts and sizes of potatoes, that it is impossible to say how long they will take doing; the best way is to try them with a fork. Moderate sized potatoes will generally be done enough in 15 or 20 minutes.

COLD POTATOES FRIED.—Put a bit of cream dripping into a frying-pan; when it is melted, slice in your potatoes with a little pepper and salt; put them on the fire; keep stirring them; when they are quite hot they are ready.

POTATOES MASHED.—When your potatoes are thoroughly boiled, drain them quite dry, pick out every speck, etc., and while hot, rub them through a colander into a clean stew-pan. To a pound of potatoes put about half an ounce of butter and a tablespoonful of milk; do not make them too moist; mix them well together.

POTATOES MASHED WITH ONIONS.—Prepare some boiled onions by putting them through a sieve, and mix them with potatoes. In proportioning the onions to the potatoes you will be guided by your wish for more or less of their flavor.—*Germantown Telegraph.*

TO OBTAIN FRESH BLOWN FLOWERS IN WINTER.—Choose some of the most perfect buds of the flowers you would preserve, such as are latest in blowing and ready to open, cut them off with a pair of scissors, leaving to each, if possible, a piece of the stem about three inches long; cover the end of the stem immediately with sealing wax, and when the buds are a little shrunk and wrinkled, wrap each of them up separately in a piece of paper, perfectly clean and dry, and lock them up in a dry box or drawer: and they will keep without

corrupting. In winter, or at any other time, when you would have the flowers blow, take the buds at night and cut off the end of the stem sealed with wax, and put the buds into water wherein a little nitre or salt has been diffused, and the next day you will have the pleasure of seeing the buds open and expand themselves, and the flowers display their most lively colors and breathe their agreeable odors.

GYMNASTIC COSTUME FOR LADIES.

Dr. Lewis, in his new work, "The Gymnastic," gives the following hints as to the proper costumes for ladies to wear in performing gymnastic exercises:

The most essential feature of the dress is perfect liberty about the waist and shoulders. The female costume may be ever so short, if the waist or shoulders be trammelled, the exertions will serve no good purpose. If the arms can be thrust perpendicularly upward without drawing a quarter of an ounce on the dress, the most vital point has been secured. It is made very loose about the head and shoulders, worn without hoops, but with a thin skirt as near the color of the dress as possible, and only stiff enough to keep the outside skirt from hanging closely to the legs. This skirt should be fastened to the belt of the dress so that it will not hang below the dress when the arms are raised.

The present style of Garibaldi waist is very beautiful. It is particularly appropriate for gymnastics; as it allows the freest action of the arms and shoulders. But to permit this waist to fall over the belt, which is its peculiar feature, the belt is usually made tight enough to keep it in position. This is wrong. Buttons should be placed on the inside of the belt, the same as on gentlemen's pants for suspenders, and the same kind of suspenders should be worn. In this way the belt may be very loose, and yet, being supported over the shoulders, it will remain in its proper position.

THINGS WORTH FORGETTING.—It is almost frightful, and altogether humiliating, to think how much there is in the common on-going of domestic and social life which deserves nothing but to be instantly and forever forgotten. Yet it is equally amazing how large a class seem to have no other business but to repeat and perpetuate these very things. That is the vocation of gossips,—an order of society that perpetuates more mischief than all the combined plagues of Egypt together. You may have noticed how many speeches there are which become mischievous only by being heard a second time; and what an army of both sexes are sworn to see to it, that the fatal repetition shall be had. Blessed is that man or woman that can let drop all the burrs and thistles, instead of picking them up, and fastening them on to the next passer-by! Would we only let the vexing and malicious saying die, how fast the lacerated and scandal ridden world would get healed and tranquilized.—*Dr. Huntington.*

THE DOLL'S MISSION.—The doll is one of the most imperious necessities, and at the same time one of the most charming instincts of female childhood. To care for, to clothe, to adorn, to dress,

to undress, to dress over again, to teach, to scold a little, to rock, to cuddle, to put to sleep, to imagine that something is somebody—all the future of woman is there. Even when musing and prattling, while making little wardrobes and little baby clothes, while sewing little dresses, little bodices, and little jackets, the child becomes a little girl, the little girl becomes a great girl, the great girl becomes a woman. The first baby takes the place of the last doll.—*Victor Hugo.*

DOMESTIC RECEIPTS.

TO PRESERVE CRAB APPLES.—Take off the stem and core them with a penknife, without cutting them open. Weigh a pound of white sugar for each pound of prepared fruit; put a teacup of water to each pound of sugar; put it over a moderate fire. When the sugar is all dissolved and hot, put the apples in; let them boil gently until they are clear, then skim them out and place them on flat dishes. Boil the syrup until it is thick; put the fruit in whatever it is to be kept, and when the syrup is cooled and settled, pour it carefully over the fruit. Slices of lemon boiled with the fruit may be considered an improvement; one lemon is enough for several pounds of fruit. Crab apples may be preserved whole, with only half an inch of the stem on; three-quarters of a pound of sugar for each pound of fruit.

BROWN BREAD.—The *Comptes Rendus* of the French Academy of Sciences of Paris contains a very long paper, which is of some scientific and more practical interest, on the art of making bread. It appears that the bran of ground wheat contains an active principle of ferment, which has hitherto not been rightly understood by chemists, and to which the name of cerealine has now been given.

This ferment can, we are told in the paper before us, be neutralized by the application of glucose, employed in a peculiar way; and being neutralized, the greater part of the bran becomes transformed into good flour. In other words what is called in France bread of the second quality, which the common people are obliged to eat on account of its cheapness, (though they do so with a certain degree of repugnance,) can be done away with, and bread equal to that of the first quality, which is consumed by the better classes, can, without increase of expense, be substituted for it.

Thus the new system seems to be of great utility, and it is desirable that our bakers should inquire into it. The bread produced is represented to be very palatable and wholesome. In the course of the experiments which the new plan necessitated, a curious chemical fact was discovered—namely, that the dark color of bread of the second quality is not caused, as has always been supposed, by the presence of bran in the flour, but by a peculiar fermentation of the flour.

SYRUP OF LEMONS.—Clarify three pounds of lump sugar, then pour into the syrup, while at weak candy height and boiling, the juice of eighteen good lemons and the peel of three, grated. Let it boil together for three minutes, strain it through a lawn sieve, and bottle it. When cold, cork it down tight, to keep for use. This syrup is ready for lemonade, punch, ices, jellies, etc., with-

CATTLE MARKETS FOR SEPTEMBER.

The following is a summary of the reports for the four weeks ending September 18, 1862:

NUMBER AT MARKET.

	Cattle.	Sheep and Lambs.	Stotes and Pigs.	Live Fat Hogs.
August 28.....	2194	7593	480	800
September 4....	2492	8635	315	1000
“ 11.....	2756	6620	900	1200
“ 18.....	3005	6484	400	1000
	10,447	29,332	2095	4000

PRICES.

	Aug. 28.	Sept. 4.	Sept. 11.	Sept. 18.
Beef cattle, northern, $\frac{1}{2}$ lb. 4 @ 6 $\frac{1}{2}$	4 @ 6 $\frac{1}{2}$	4 @ 6 $\frac{1}{2}$	4 @ 6 $\frac{1}{2}$	4 @ 6 $\frac{1}{2}$
Sheep and lambs, in lots, $\frac{1}{2}$ lb. 3 $\frac{1}{2}$	\$2 $\frac{1}{2}$ @ 3 $\frac{1}{2}$	\$2 $\frac{1}{2}$ @ 3 $\frac{1}{2}$	\$2 $\frac{1}{2}$ @ 3 $\frac{1}{2}$	\$2 $\frac{1}{2}$ @ 3 $\frac{1}{2}$
Swine, stores, wholesale, 4 $\frac{1}{2}$ @ 5	4 $\frac{1}{2}$ @ 5	3 $\frac{1}{2}$ @ 4 $\frac{1}{2}$	3 $\frac{1}{2}$ @ 4 $\frac{1}{2}$	4 @ 5
“ retail, 5 @ 6	5 @ 6	4 @ 6	4 @ 6	4 $\frac{1}{2}$ @ 5 $\frac{1}{2}$
Dressed hogs, 4 $\frac{1}{2}$ @ 4 $\frac{1}{2}$	4 @ 4 $\frac{1}{2}$	3 $\frac{1}{2}$ @ 4	4 @ 4 $\frac{1}{2}$	4 @ 4 $\frac{1}{2}$

REMARKS.—Most of the Northern oxen at market, this month, were ordinary, grass-fed bullocks, and none have been sold for anything over 6 $\frac{1}{2}$ c $\frac{1}{2}$ lb., and only a few pairs at that price. A choice few of the Western steers have been sold for 7c, 23 to 32 $\frac{1}{2}$ cent. shrink. The butchers generally hope to gain something on the shrinkage allowed for the best Western cattle. A gain of 2 $\frac{1}{2}$ cent. on the shrink is nearly equal to $\frac{1}{4}$ c on the price $\frac{1}{2}$ lb.

It will be noticed that the number of cattle has increased about 300 $\frac{1}{2}$ week, for the last four successive weeks, or from 1649 at market August 21, to 3005 reported September 18. The number of Western cattle has rather declined during this time. The increase, therefore, has been in the stock from the North and East, and consists of the lighter quality of beef cattle and of stores, together with not a few animals which do not seem to belong to either class—neither fit for the shambles, the pasture nor the stall, and which make drovers much trouble, as nobody wants to buy them. The poorer qualities of beef have consequently declined in prices, during the month, with an increasing dullness in trade. At the same time the first quality of beef has found ready sale and pretty uniform prices.

The mutton market, so far as live stock is concerned, has been very steady, with many symptoms of improvement, although prices have not materially changed. The price of wool encourages farmers to keep sheep instead of cattle.

Quite a number of working cattle have been sold during the month. Few oxen sold at higher prices which were not good beef. Prices from \$55 or \$60 to \$115 or \$120 $\frac{1}{2}$ pair.

The market for milkers is still considered dull by the dealers, especially for those of ordinary goodness. Really good milch cows, however, sell readily at fair prices. Cows with young calves are sold at all prices from \$20 to \$50.

The business at the swine market in Brighton has been small during the past month, and indeed for the last six months. Purchasers have been afraid of the disease.

POSTAGE STAMPS.—The United States postage stamps, which are now coming so freely into circulation, besides having the amount of their value in figures upon the upper corners, may be readily recognized by their colors and vignettes, which are as follows:—

Amount.	Vignette.	Color.
1 cent.....	Franklin.....	Blue.
3 cent.....	Washington.....	Pink.
5 cent.....	Jefferson.....	Chocolate.
10 cent.....	Washington.....	Green.
12 cent.....	Washington.....	Black.
24 cent.....	Washington.....	Lilac.
30 cent.....	Franklin.....	Yellow.
90 cent.....	Washington.....	Blue.

☞ Lake Superior copper production has now reached to an amount more than half as great as the Cornwall mines of England. The average production of the latter is about 13,000 tons; that of Lake Superior, for 1861, is 7450 tons. The increase



DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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BOSTON, NOVEMBER, 1862.

NO. 11.

NOURSE, EATON & TOLMAN, PROPRIETORS.
OFFICE...100 WASHINGTON STREET.

SIMON BROWN, EDITOR.
HENRY F. FRENCH, ASSOCIATE EDITOR.

THOUGHTS ABOUT NOVEMBER.

"Sweet Summer, sighing, flies the plain,
And waiting Winter, gaunt and grim,
Sees miser Autumn hoard his grain,
And smiles to think it's all for him."

Home Journal.



NOVEMBER, in anticipation at least, is generally regarded as an important month.—We think of it as a sort of transition period, a mingling of Fall and Winter, with just enough of Summer to give an edge to its sharp corners. But in realization it is often found that these corners are so rounded that

its short days, coming as they do one at a time, glide away more comfortably than we expected, when looking upon them as a unit, and at the close, as we look back upon the month, the remark is often made that "November has been quite pleasant, after all!"

How the Month will prove, this year, remains for each one to determine for himself. With an eye to see and a heart to enjoy the beautiful and the poetical in nature, such as the unknown writer of the four lines at the head of this article must have possessed, November and all the other months of the year will indeed prove a "joy forever."

To the farmer, too, whose work is kept up squarely with the season, none of the various phases of this fickle month will come amiss, but all be made to fit in with his general plan of operations. Should the frost-king seal up the earth, as he sometimes does, by the middle of November, all the potatoes and other root crops of this class of farmers will *happen* to be safely in the cellar.

But to another class—the procrastinators, the behind-handers—this month will probably prove much like its predecessors, very unpropitious—every storm and every freeze happening at just the wrong time. We trained in that company, once just long enough to learn to dislike its tactics, and to pity those who have "enlisted for the war."

We recollect, when a boy, of being on pick-it duty one day in a potato field, after the soil was pretty well frozen, and when a cold, piercing wind blew most uncomfortably all day long. With strong hoes the crust of frozen earth was broken and tipped off the hills, while with mitted, benumbed fingers we gathered the potatoes from their beds and from the crust into which many of the upper ones were frozen. It makes us "blow our fingers" even now, to think of that day's work. The next morning, to the great joy of one little fellow, at least, it was announced that the ground was as solid as a rock, and that no more potatoes could be dug till it thawed; and as it did not thaw out again that fall, about an acre in one field remained unharvested. This was an experiment which is not often repeated, probably. But potatoes are frequently left in the ground until there are frosts sufficiently severe to injure some of those which lie upon or near the surface of the ground.

Another crop that sometimes stands in the field until November is *Indian Corn*. This noble grain may be harvested at any time from the last of September till the snow flies. Off West they leave it in the fields until mid-winter, or until consumed or marketed. But here in New England, where

we calculate that the stalks, husks and butts of an acre of corn are about as valuable as the hay grown on any other acre of "mowing," on the farm, we must consider the stover as well as the grain, in comparing the advantages of an early and late corn harvest. The husks and butts that remain in the field till late are not as valuable for fodder as those harvested in October, but the grain itself, except the ears that fall to the ground, is not injured by wet or cold.

What a wonderful plant, or *grass*, as the botanists call it, this Indian corn is. Who does not like to watch its growth,

When, like a column of Corinthian mould,
The stalk struts upward, and the leaves unfold;
Or when the strong foliage bears the standards high;
And shoots the tall top-gallants to the sky!

Equally beautiful is a field of corn when the golden ears peep modestly through the husks white already to the harvest. There is something animating in the corn crop, from beginning to end, especially in the rich appearance of the ripened grain. Change a company of laborers from digging potatoes to gathering corn, and every man and boy will not only stand up straighter, but his eye will be brighter, his motions quicker, and his song or voice more cheerful.

Beautiful as this crop is, its wonderful utility will still be regarded by farmers as its chief recommendation. The different parts of the crop are already used in a great variety of ways, and others may yet be discovered. We lately saw the statement in the newspapers that a foreigner had filed his application, with specimens, for a patent for various uses made of maize shucks. The varieties include yarn, maize cloth, paper of beautiful qualities, white and colored, from silk to parchment texture, maize flour, &c.

Corn husks have been used in the manufacture of common paper for many years, and are an excellent material for under-beds. William Cobbett wrote a book after his return to England, recommending corn as food for man and beast, which was printed on paper made of corn husks. He also smoked them in his pipe as a substitute for tobacco leaves. Would that his example in this respect might be followed by all Americans who must smoke in other people's faces!

THE AREA OF THE GREAT AMERICAN LAKES.—The five great lakes of North America have lately been surveyed, and it is found that they cover an area of 90,000 square miles. The total length of the five lakes is 1534 miles. Lake Superior, at its greatest length, 355 miles; its greatest breadth is 160 miles; mean depth, 988 feet; elevation above the sea, 627 feet; area, 32,000 square miles. Lake Michigan is 360 miles long; its greatest breadth is 108 miles; its mean depth is 900 feet; elevation, 687 feet; area, 20,000 square miles. Lake Huron, in its greatest length, is 200

miles; its greatest breadth is 160 miles; mean depth 300 feet; elevation, 574 feet; area 20,000 square miles. Lake Erie is 250 miles long; greatest breadth 80 miles; mean depth, 200 feet; elevation 555 feet; area 6000 square miles. Lake Ontario has a length of 180 miles, and its mean breadth is 65 miles; mean depth, 500 feet; elevation above the ocean, 262 feet; area 6000 square miles.

For the New England Farmer.

CORRESPONDENCE FROM MAINE.

POTATO ROT.

Since about the 15th of September the farmers have been discovering this disease on their potatoes. They looked remarkably well in this section, considering the dry times, till the rust began to come upon them. It does not appear now that it will be any thing near like some years ago, but is more extensive than for three years past. The breadth planted has been rather on the increase, for a few years, to be fed out to stock, on account of the rot being less prevalent, the starch factories not buying them up, and a higher value set upon them for feed for sheep and stock, by the farmers.

WHEAT, CORN AND OATS.

Wheat is good—better than 1861, and more was sowed than for many years past—but not quite as good as in 1860. It has to be sown just as early in the spring as the land will admit of the teams working without "mudding it in," so as to get it ahead of the insects. It has proved the best way, to fit the land ready to sow, late in the previous fall, as far as I have seen or heard, and then as soon as dry enough, sow the wheat. Some have contended that if the snow was not off so as to sow in April, it was safe and best to sow upon the snow, or in the mud and water; but my experience is, wheat sown on snow-drifts, in mud-puddles, or the like, in early spring, has not vegetated sufficiently to warrant the practice.

Corn is a light crop, but much better than was even hoped for in August. The worms and drought in the spring injured it materially, so much that it did not entirely recover, though September has done wonders in the cornfields. There was more planted than last year.

The oat crop is full an average, yet not so many were sown as in some years; but as the aphids injured the crops but little, they will yield better than last year.

FROSTS AND THE WEATHER.

August gave Franklin County, as well as most parts of the State, frosts on the 18th, 24th, and 31st, each doing some damage to the "tender vines," and in many places nipping the corn leaves rather close. September, too, on the 22d and 25th, still harder. October 1st, a very hard frost, not slighting any of the vegetables along Sandy river, which it is usual for Jack Frost to greet with a withering kiss.

The weather, for harvesting, through September, has been delightful. Had it not been so the crops would have suffered, because the last 600,000 tallied among the hired help upon the farms, as well as among the farmers and farmers' sons. The streams are low—very low. O. W. TRUE.

Elm Tree Farm, near Phillips, Oct. 3, 1862.

For the New England Farmer.

AGRICULTURE IN COMMON SCHOOLS.

The true, fundamental idea, I think, which should govern the introduction of studies into our common schools, is—

1. That no sectarian doctrines of religion should be taught. The importance of this prohibition has long been discovered.

2. That the studies permitted should be *general* and not *special*. That is to say, studies which will *undoubtedly* be of *subsequent use to all*, and not those which *may* possibly be so to some scholars in the avocations in which they may engage.

Hence Reading, Writing, Arithmetic and English Grammar are taught as fundamental studies; and then follow those which may be termed secondary, such as the Elements of Chemistry, Geology, Botany, the higher Mathematics, some of the ancient and modern languages, &c., usually as the scholars may elect.

But a small number of individuals in the State—*quasi* or amateur farmers, irregular teachers and book publishers—usually actuated by good motives, now ask that the Elements or the Principles of Agriculture be taught in these schools; and to further the object, the State Board of Agriculture has recommended it, and its Secretary, in connection with another gentleman much interested in education, has prepared a very good and neat Manual adapted to this purpose. The advocates of this plan seem to be possessed with the idea that farming in Massachusetts is unduly on the decline, that it is an occult science, and not sufficiently scientific in its operations, and that its prospective manual resources are alarmingly deficient. Hence this new mode for its recuperation.

Whether agriculture is or is not on the decline in Massachusetts, it is pretty clear that it cannot be controlled by the school-house; it is subject to other and higher laws. As to its being an abstruse matter, (except in the broad field of theory), requiring early induction in our schools, to the practical farmer who can revel in his manure heaps, it is ridiculous. Agriculture should be as simple and confined to as few principles as possible; and these few principles—most every practical farmer will admit—are best wrought out from the soil by each individual, rather than confounded in the school-room, where more, probably, would be attempted to be taught than our exact knowledge would warrant.

Of those boys who attend our schools, only a small proportion intend to become farmers. To introduce the study of agriculture, therefore, would be well nigh futile, unless its study should be made *obligatory*—like some of the general studies—which no one, probably, will have the effrontery to demand. Besides, unless the farmers sustain it, it must fail. Have *they* asked for it, and will *they* sustain it? I think not. And here, as a partial answer at least to these queries, let me ask, (looking in the most favorable light upon all that has been said and done in furtherance of this "consummation so devoutly to be wished" by many good men, can any one tell the public how many boys have engaged in this study in our common schools in this State during the past year? The facts would be interesting to all concerned.

Admitting even that agriculture might be taught

to advantage to some in our schools, it is an important inquiry whether they can possibly admit all the studies which may be useful to some scholars who attend them. Heretofore it has been considered wise to restrict them to those of a general or universal character. Much, it is supposed, is to be left to the student after he leaves school—more particularly the acquisition of his trade or profession. If one class of persons claim that the elements of agriculture be taught, another has as much right to claim that the elements of law (Blackstone and Kent) be also taught; still another those of medicine, and so on to the principles of carpentering, shipbuilding, tailoring, &c. All these studies or operations, in their proper place, are very useful; but it must be plain to every reflecting mind, that the common schools are not the place for them, and that the committees or powers over them, must economize and closely discriminate in the selection of useful studies to be there taught. This being so, the best rule they can adopt is, that they shall be *general*, not *special*.

We are now engaged in an important civil war. The church has faced about and buckled on the knapsack, and all our schools, from the highest to the lowest, are reveling in the odor of gunpowder! A remarkable change has come over New England; her Peace Societies are a mockery, if in being, and her desire is that her plow-shares and pruning-hooks should be transformed into spears and implements of war. And some teachers, even, catching the spirit so rife, have urged the policy of teaching *military tactics* in our schools as a regular branch of education! Really, what next in the march of improvement? Undoubtedly the national defences, as well as agriculture, are all-important; but that their rudiments should be forced into the common school-room must strike the mass of reflecting persons as impolitic. If the young men of our higher schools and academies wish to drill—at proper seasons—for pleasure or physical development, (as those of one, at least, do in Boston,) there probably can be no serious objection to it; but military drill and kindred exercises should not be allowed to interfere with the ordinary duties of the common schools, for they are not instituted to make farmers, mechanics, professional men or soldiers; but to give a proper, general education to all, which shall be of value to them in whatever vocation they may engage.

It has been frequently said that our schools are already too much crowded with studies. But it is thought that in making room for agriculture, some others should be omitted or abridged, or that scholars should select the number and kind of studies they wish to pursue. Under these conditions, perhaps no one would object to a scholar's pursuing a course of agricultural rudiments. But even then, its utility is somewhat doubtful, as it may be well questioned whether the larger scholars who attend our common schools are of sufficient age to understand the many abstruse points involved in the theory, if not in the economy of this art. In fact, they are not well understood by any one. But even if what is taught is well settled, scholars must have a deep interest in the subject to retain anything of any value. Too much, undoubtedly, is sought to be crowded into the youthful mind, at the present day—or perhaps

it might be better said that too much is crowded out, for much that is taught disappears forever.

"Voracious learning, often overfed,
Digests not into sense its motley meal."

Without touching directly upon the question how agriculture should be taught, I would, in conclusion, observe generally, that the youth who pursues his studies little by little, who spreads them over a greater number of years, who commingles with the world, and judges of what he is in most need, usually makes the smartest and most practical man. A knowledge of the busy outside world—a knowledge of its ignorance and its learning—is all-important in education, as it tends to make a person wise. Much book learning, without the wisdom or means for its application, is too often characteristic of our young men. Hence the sarcasm of Pope :

"Some are bewildered in the maze of schools,
And some made coxcombs, nature meant for fools."

West Medford, Sept., 1862.

D. W. L.

For the New England Farmer.

THOUGHTS ON ECONOMY.

It is thought by many that unnecessary expenditures are beneficial in causing the circulation of capital, just as though the circulation of capital without the production of economization of real value, could be universally productive of the elements of wealth.

Now a little reflection on some of the principles involved in the science of political economy, shows the fallacy of such reasoning. It is, indeed, true, that such expenditures do often tend to enrich certain individuals, but they just as surely tend to impoverish others. Take, for illustration, the article of tobacco, from the importation of which the British government alone derives an annual revenue of \$28,000,000! Now, it is admitted by all that tobacco, as generally used, is of no benefit to the consumer; indeed, its uses are far overbalanced by its abuses, but overlooking this fact, we see that, unlike food, it does not strengthen and nourish the physical system; neither, like clothing, does it shelter our bodies from the inclemency of the weather, nor like flowers, pictures and other ornaments of similar nature, does it tend to refine and elevate the mind and develop those spiritual qualities which distinguish the soul of man from the instinctive mind of the brute. In short, it does the consumer no good whatever, and is, in reality, a capital of the most unproductive kind, while food, clothing, &c., are productive capital, whatever benefit may be derived from their use.

Suppose an agriculturist in America raises a quantity of tobacco; it then goes through the hands of the tobaccoists and one or more merchants, each adding to the pecuniary—not the intrinsic—value of the weed, by which addition of value each gets pay for the time, labor, &c., which he expends on it. The tobacco is then exported, the net profits arising from its culture, and from the time, labor, &c., expended on it by the tobaccoist and merchant, being so much real gain to the capital of the country. All time and labor below the net profits, cannot be reckoned as a *clear* gain, as they might have been applied with equal advantage in some other department, and are, in reality, so much *capital expended* in its

production. The cost of transportation again increases the price of the tobacco, and then the duties imposed by the government, where it is imported, raises the price still higher, and then, before reaching the consumer, the merchants, through whose hands it goes, put on the "finishing touch." That part of the price which forms the net profits of the European merchant is not lost to the *country* where the tobacco is consumed, although it is lost to the consumer. Neither does the country lose the duties collected from it as an import, for government must impose taxes of some kind, for its support; but the consumer pays more than his share of government expenses, provided he consumes other taxable importations equally with the nonconsumer of tobacco. The other portion of the cost, however, is a dead loss both to the consumer himself and the country where it is consumed, the tobacco being no real equivalent for the money thus expended. Not only to the consumer and the country where they are consumed, are all kinds of unproductive capital a dead loss, but also to the world,—for the time, labor and capital expended in their production might equally as well be applied to the production of such capital as would be productive. Money, too, paid for unproductive capital, might just as well be given to the persons receiving it, without as with the intrinsically valueless remuneration. Or, as far as the economy of the question is concerned, it might as well be stolen in order to keep it in circulation. Tobacco, however, is but a single item in the list of articles composing the unproductive capital of the world, and unhappily, America has done her full share in their consumption.

What a vast amount of money do we, *even now*, spend simply for show. There is that one little item of imported *flowers for ladies' bonnets*, to say nothing of domestic ones; their cost is greater than that of railroad iron, and wounded soldiers often suffer for want of articles of comfort which such money would help to bring them. In many towns in New England, the consumption of tobacco, in its various forms, exceeds the whole amount paid for taxes on all kinds of property, while there is scarcely a town whose appropriations for educational purposes equals this self-imposed tax!

Nothing can be considered unproductive capital which tends to make men wiser and better, and to elevate humanity in the scale of progress and civilization. Millions are spent annually in dress to satisfy the requisitions of that tyrant of tyrants, fashion, which are really needed in the same department to answer the demands of undepraved taste, and to preserve the health and strength of the physical system.

The principles of political economy were formerly supposed to be involved only in the pecuniary affairs of nations, and this idea is conveyed in the definition which many economists have given to the term,—but it is evident that those principles, like all others, are of "universal application," many of them going beyond mere pecuniary questions, and are applicable in any and every department of life. Economy, combined with perseverance, energy and industry, is the great element of success in every laudable undertaking,—a great lever of almost illimitable power to raise humanity to a higher scale of civilization. Economy of time bears the standard of victory up the steep ascent of the hill of knowledge, the few spare moments

saved daily from the haunts of idleness and useless pleasure being sufficient to make any man of medium talents rich in mental wealth. In Napoleon's early days, while in the military academy, some of his fellow-pupils wasted much of their time in a neighboring shop, which he, however, seldom visited. Afterwards—I think it was when appointed to the command of the army of Italy—he called at the shop and was recognized by its mistress as the young soldier who had spent so little of his time there. "Ah, Madam," said Napoleon, "had I done so I should not now be in command of the army of Italy." It was the same great man who afterwards expressed the idea that it was the extra five minutes that saved victories. Take care of the pence, said Franklin, and the pounds will take care of themselves. Take care of the spare moments, and you thus save to yourselves years of time otherwise unoccupied. Save up to yourself daily a few of those propositions of whose aggregate composed the sum total of all knowledge, and you will at length possess a large share of imperishable wealth of the most productive kind,—productive of happiness and usefulness to yourself and others, in this world and in the future.

If acceptable, I should be happy to write another article on this subject during some of the spare moments. MONTHLY READER.

September, 1862.

REMARKS.—Write on. These are just the doctrines we all need—truths that cannot be successfully controverted.

MIDDLESEX CATTLE SHOW.

The annual exhibition of the Old Middlesex Society took place at Concord, on Thursday last, Sept. 18th. The weather was perfect. There was a clear sun and a slight breeze, just enough to make a little exercise agreeable. The show of cattle, horses, swine and poultry was unusually small,—smaller, indeed, than we have ever witnessed before on a similar occasion. There were but few articles of machinery on the ground—a Wood's mowing machine and a hay-tedder being all that we saw,—and no implements of husbandry, save one or two of trifling importance, with the exception of some beautiful samples of Nourse's iron plows. At the *plowing match* some dozen teams were engaged, and from the implements used, and the reputation for skill of the plowmen using them, we have no doubt that the work was well done. The attendance upon the field was much smaller than usual. The show of fruit in Exhibition Hall was of a very superior character,—equal to that of the Massachusetts Horticultural Society, which was on exhibition at the same time. Nothing, it seems to us, could be finer than the apples and pears presented. There were a few excellent vegetables, one bag of wheat, two of barley and a few traces of seed corn. The exercises at the table were eating the dinner, a few words from the President, an address by Dr. LO-

RING, of Salem, an hour long, upon national topics, beautifully written and delivered, and remarks by Dr. FISHER, the delegate from the North Worcester Society. The usual spicy after dinner speeches were wholly omitted, as well as the reading the awards of premiums and the reports of Committees! In the business meeting, the old board of officers was re-elected.

WOOL-GROWERS' CONVENTION.

By a resolution of the Directors of the Vermont State Agricultural Society last winter, a Wool-Growers' Convention was called for the first day of the fair at Rutland. This was an experiment, to see if wool-growers could not find something of interest to talk about, as well as horse-breeders, and those engaged in other branches of agriculture. It was thought to be an interest which Vermont farmers should talk about. Still it was feared that enough of them to make a meeting interesting could not be got together, or that the meeting might fail to be sufficiently interesting to make it worthy of repetition. In all this, fears have proved groundless. It was held Sept. 9; it was well attended; it was exceedingly interesting; and it was unanimously agreed to be continued.

The President of the society, EDWIN HAMMOND, of Middlebury, who is a large breeder of valuable fine-wooled sheep, such as he sells from \$25 to \$500 each, opened the meeting by a few pertinent remarks upon the great interest Vermont has in the wool business, and the importance of wool-growers meeting together to discuss that interest, and then introduced the Secretary of the society, DANIEL NEEDHAM, of Hartford, Vt., who gave a very interesting address, containing some valuable statistical matter, among which we noted the following. He said, in substance:

We not only clothe ourselves neatly and comfortably, but in doing it, we use up all the wool that the country produces, and large quantities of imported wool, beside imported fabrics. Farmers for want of information disposed of much of their wool at ruinous sacrifices, when the war broke out—in this State below the cost of production.

In 1861 we imported \$5,000,000 value of wool and \$28,000,000 value of woollen fabrics, and that was \$10,000,000 less than in 1860. The range for three years has been \$35,000,000, to \$45,000,000. We import the products of 13,000,000 of sheep, which we had better keep in this country. This proves that we are in no immediate danger of getting too many sheep.

The increase of population in the United States would require the wool of 3,000,000 of sheep.

No animals are so well adapted to Vermont pastures as sheep, and none so productive.

In 1850 the number of sheep in the State was a little over a million, and the yield of wool a trifle over three pounds a head. By improved care this yield has been largely increased.

In 1850 the total of sheep in the United States was 21,723,000, averaging 2½ pounds of wool per annum.

We read of the great care bestowed upon some of the fine-wool flocks of Europe, without seeming to be aware that equal care is bestowed upon some flocks in Vermont.

To show the need of protection to the wool-grower, as well as to the manufacturer, look at the prices of imported wool. In 1861 it averaged 11½ cents. It comes mostly from South America, where the principal cost of production is shearing the sheep.

While we can produce every grade of wool needed in this country, we should be independent of any other country. Protecting the manufacturer does not wholly protect the wool-grower. One of the great needs of legislation is a repeal of the "reciprocity treaty," the benefits of which are all on the British side.

Give equal protection to all the great interests of the country, and all honest men will be satisfied.

The prospect of the next few years is very encouraging to the wool-growers. In consequence of the supply of cotton being cut off, we shall use more wool, beside the great demand for army purposes. We had no surplus last year, and the clip of 1862 was very early bought up, and the price has continued to advance.

The great practical question, and the one for which this convention was called principally to discuss, is, how we shall prepare wool for market. Is it most advantageous to the farmer to sell his wool washed or unwashed? The buyers usually make about 25 per cent. difference between washed and unwashed wool, but no discrimination between that which is thoroughly clean, and that of a man who has only washed his sheep to make his wool sell at a higher price, while it is but little lighter than that sheared without washing the sheep. The conscientious man has very little encouragement.

The question of the health of the sheep—whether it is injured by washing and carrying the fleece till very warm weather—is an important one for farmers to discuss, and if possible, produce a uniformity of action.

The improvement of Vermont sheep has been wonderful. In 1840 there was not a buck in the State that would shear 12 pounds. Now there are plenty that give 20 to 25 pounds, and it is not made up of oil and dirt, but will give 60 per cent. of genuine, clean wool.

With such bucks to be had, there are men who still keep their old native stock of sheep; and generally the same men have unimproved cattle, and work with the old wooden and wrought-iron plow.

After trying all sorts, the majority of Vermont wool-growers have settled upon the Spanish merino as best adapted to their soil and climate, and mountain pastures.

The average cost of keeping sheep is estimated per annum as follows: Illinois, 60 cents; Iowa, 75c; Michigan, 83c; Virginia, 60c; New Jersey, 60c; Pennsylvania, 50c; Maine, \$1; California, 75c; Vermont, \$1.30.

The average increase in Vermont is 70 per cent.; in Ohio, 80; Virginia, 99; New Jersey, 80; Maine, 90. Still, Vermont leads all the States in wool-growing, and production of valuable sheep for sale, which we furnish to nearly all the other wool-growing States, which buy our bucks at \$200 to \$500, and ewes at \$25 to \$50 each.

In this day of trial of our country, there is no way we can serve it better than in studying to improve it, and increase its wealth, and make wealth and civilization twin sisters. If our country demands all of our young men, their wives, sisters and mothers will unite with the old men to sus-

tain Vermont agriculture during this great contest between "Liberty and Slavery."

After the close of Mr. Needham's address, D. E. NICHOLSON, of Wallingford, was called up, and he gave the convention a stirring, short speech, in his happiest mood. He said that he hoped all Vermont would not be carried away by his friend Needham, and rush into the wool business, because there was a great beef and dairy interest in the State, which it was not worth while to forsake at once, because the sheep farmers were now reaping an extra harvest. He thought, however, a wool-growers' convention was not exactly his place, as he kept no more sheep than the law allowed, but he sold the clip of them of two years yesterday, and supposed by that means had got into this good company of Vermont wool-growers—these developers of the boundless wealth of the mountain pastures of the State. We ought to cherish sheep as a mine of wealth, and with this view we ought not to cherish 30,000 dogs, nor tolerate their owners, unless they are able to give bonds for their good behavior. The highest interest of the State demands a dog law, and wool-growers should declare that they will have one, and that the effort to pass such a law shall not be put down, as it has been, by the owner of a bitch and pups, or who had some friend that owned such stock, whose vote he was anxious to secure, and therefore would defeat an effort to rid the State of such a nuisance as our host of worthless curs.

Mr. MARSH, of Clarendon, moved a vote of thanks for the address of Mr. Needham, and that 1000 copies be printed for distribution. In regard to shearing sheep without washing, he has fully tried both ways, and is convinced of the advantage of not washing. We can shear our sheep a month or two earlier, and they suffer less. I sheared May 1, and it was followed by a cold storm, but I sheltered the flock, and they did not suffer as much as sheep often do in June, after washing and shearing; and he was satisfied that the sheep winter better if sheared early, without washing.

OLON ROBINSON, of New York, being called upon, gave some information relative to sales of mutton sheep, and growing lambs for the New York market, and about the prospects that wool-growers have before them. About washing sheep, he said that he had come to the conclusion, after careful consideration of the subject through a series of years, that a farmer cannot afford to wash. The manufacturer can cleanse the wool cheaper than the farmer. He urged farmers to carefully try the experiment to see which course brings the most money. He used to think it cruel to dip sheep very early in the spring, but has lately become satisfied that they suffer less than they do if washed and carry their fleeces late in June. Owing to the short supply of cotton, it is evident that we must clothe ourselves much more in woollens in future; and this will increase the demand more than wool-growers can supply at present high prices; and this should encourage them to persevere in all improvements. If the price again recedes, remember that New York always furnishes a market for over half a million mutton sheep a year.

NATHAN CUSHING, of Woodstock, said that our fine-wool flocks have been continually improving for thirty years, and that it is an art to keep up improvement that must be learned, but it is

worthy of attention of Vermont farmers, whether they cannot profitably increase the production of mutton sheep. According to information given us by Mr. Robinson, it is a profitable branch of farming.

JUDGE COLBURN, of Springfield, Vt., thought if all wool-growers could be induced to adopt the rule not to wash sheep, it would be an advantage to the State. At present, the only discrimination in buying, is to deduct one-fourth the price of washed wool, if the same grade is unwashed. If we ever adopt a rule to do away with washing, we shall get rid of very unpleasant, and some think unhealthy work.

A gentleman from Western New York said that the disposition of manufacturers to buy unwashed wool was largely increasing. He knew one who tried 5,000 pounds, year before last, as an experiment, which satisfied him so well, that he bought 80,000 pounds last year. In his own experience he had proved that unwashed sheep winter better than they do when washed and sheared a month later.

A resolution was now introduced by some one, and read by the Secretary, that it is the sense of this convention that we should strive to produce wool, and not oil. This was evidently intended as a hit at those who run upon a strain of sheep with very oily fleeces. The resolution was debated quite earnestly, and at first seemed likely to pass, but in the end would have been almost unanimously voted down, if it had not been withdrawn. So much for the advantage of discussion.

JUDGE COLBURN thought that although Vermont has the best flocks in America, we are tending too strongly toward producing very oily fleeces, which weakens the constitution of the sheep. Some of the high-priced bucks sold to go West, have two pounds of oil to one pound of wool.

SOLON ROBINSON thought it all resolved into a matter of dollars and cents. If it is more profitable for a farmer to procure oily fleeces, he should not vote for this resolution. It is not a point of morality, but a point of interest, that he has to settle, and he did not believe it was for the interest of Vermont farmers to adopt the spirit of this resolution.

Mr. MARSH thought it was not good policy to change our course of breeding, while we find ready sales for wool, and while the bucks that are most oily, are sought after to cross upon Western native sheep. Farmers must look to their own interest, and that will regulate the production of oily wooled sheep.

DANIEL KIMBALL, of Clarendon, thought that voting for this resolution would tend to hurt the credit of Vermont sheep, as a sort of confession that they were generally too oily.

Mr. LESTER, of Rutland, moved to lay the resolution on the table, as it was useless to adopt it, since farmers would raise such sheep as were most profitable.

JUDGE COLBURN thought it would not be so easy for farmers to sell their wool in peace times as now, full of grease and dirt.

Mr. CUSHING said that many breeders are now satisfied that very oily sheep are not as profitable as others that keep up the same fineness and length of fibre, with just oil enough to protect it. He is satisfied that very oily sheep are not hardy,

and that some of the most profitable Vermont flocks show a small amount of oil. He has sheared bucks of this kind that gave 16 to 20 pounds of wool.

GEO. CAMPBELL, of Westminster West, thought that much of the oil was made by feeding; that he could by that means make the same sheep show more or less oil. He is sure that those that run most to oil are of a weaker constitution than others. He had travelled much in this country and Europe in pursuit of knowledge about sheep, and is satisfied that Vermont has the best stock in the world, better than Spain. He has tried all sorts, and settled upon the Spanish merino as the most profitable breed; and he is also satisfied that it is not profitable to wash sheep, because by not doing it, he can shear early, say about May 1, and protect the sheep a few days, and they are not injured, and he thus saves wool. When he used to wash, and turn out to pasture, much wool was lost upon briars and bushes.

He is sure that, one year with another, his clip sells for more money unwashed than it would washed, and he saves the labor and health of his sheep. The wool clipped early looks better, and often is better, than washed wool. Some buyers think that heavy fleeces must be dirty; and, to avoid this objection, he has divided and tied up two to a sheep, and then they sold without any objection. It is now ten years since he has practiced washing sheep.

Mr. CUSHING practices the same plan of dividing heavy fleeces, and finds it works well.

An old farmer present remarked that he had learned something in this respect to pay him for the trouble of attending this convention.

It was unanimously voted to continue to hold similar meetings at each State Fair, and that the question discussed here, be earnestly considered by all Vermont wool-growers.—S. R. in N. Y. Tribune.

For the New England Farmer.

RICHMOND PRICE CURRENT FOR JULY.

It may amuse your readers to look at the prices of provisions, groceries, &c., in the city of Richmond, in the month of July. When my informant left, prices were still advancing. This statement is entirely reliable, coming from a cousin who has made his escape from that city, after serving as clerk in a store the past year. He passed a week at my house, and has come to the conclusion that rebellion is expensive and terribly inconvenient.

Fresh beef, lb.....	62½¢	75	Cotton cards, pair.....	\$25
Fresh pork.....	None.		Tea, lb.....	\$16
Salt pork, lb.....	\$1.00		Coffee, lb.....	\$3.50
Hams.....	\$1.00		Mustard, small can.....	\$5
Fresh and salt fish.....	None.		Brown sugar, lb.....	\$1.00
Cheese.....	None.		Molasses, gal.....	\$6.00
Butter, lb.....	\$1.50	2.00	Candles, lb.....	\$2.00
Eggs, doz.....	\$1.25	1.50	Morphine, oz.....	\$25
Potatoes, bush.....	\$16		Calomel, oz.....	\$25
Cabbages, head.....	\$1.00		Quinine, oz.....	\$25
Onions, each.....	.25		Atlantic sheeting, yd.....	\$1.50
Bar soap, lb.....	\$1.50		Prints, yd.....	\$1.00
Starch.....	None		Heavy wool filling jeans,	
Salt, per sack, made in			per yard.....	\$16
Val., and poor.....	.25		Satinets, cassimeres and	
Milk, quart.....	.30		woolen dress goods.....	None.
Boots, pair.....	\$2.50	3.00	Coates' spool cotton, each	\$1.00
Shoes, pair.....	\$1.50	2.00	Brooks & Clarke's, do.....	.60
Ladies' gaiters, pair.....	.15		Sewing silk, skein.....	.30
Soft hats, each.....	.16		Linen braid, lb.....	\$9.00
Dress coats.....	\$20		Powder, lb.....	\$8
Pants.....	\$20		Revolvers, each.....	\$50

New York, Sept. 12, 1862.

P.

For the New England Farmer.

RETROSPECTIVE NOTES.

"FEVER AND DYSENTERY"—SUDDEN CHANGES IN DIET, &c.—In the issue of this journal for Sept. 6th, the editor, under the first portion of the above heading, has given to his readers several valuable and seasonable hints in respect to the avoidance of the above-named diseases, as well as of other minor ailments which are apt to occur about this time of year. From a wish to second the benevolent and judicious efforts of the editor to enable his readers to escape a great deal of danger and suffering, common at the autumnal season, we yield to the impulse which prompts us to commend the article referred to, as worthy of a second, or even a third or fourth reading, which we can do most cordially, as the advice and suggestions contained in it are really as judicious as if they had been written by one of the oldest and most sensible physicians in Boston, and as we feel sure that those who will fix them firmly in mind and memory, and make practical application of them, will be likely to escape disease and suffering which might otherwise happen either to themselves or to their families. A great deal of the sickness which mothers and doctors have to attend to during the fall might be avoided, if such precautions as those recommended in the article under notice were more generally adopted. The bowel complaints and other ailments of children, as well as of adults, at this season of the year, are probably as frequently owing to sudden changes in temperature, exposures to damp and cold, and the want of sense and care which should adapt the clothing to these changes and exposures, as they are to errors in diet, and the immoderate consumption of fruit and vegetables. We would add, therefore, to what the reader will find in the article under notice, as to sudden checks to perspiration, and exposure to night air and currents of air, that during cool and rainy days, and when the mornings and evenings are quite cold compared with the heat of the day, more than usual care should be taken so to adapt the clothing, and of children more especially, to the atmospheric condition and temperature that there shall be no chilliness of the surface of the body. There is, without question, much carelessness in this respect as to children, and physicians of discrimination and benevolence have often been able to trace complaints which they have been called upon to prescribe for, about this season of the year, to a negligence which has surprised them, in regard to adapting clothing to the changes of the weather. When mornings are cool or cold, and when a day of rain, raw, east wind, or other uncomfortable-ness occurs, the clothing should certainly be different from that well enough for the warmer mornings and days of the season, though both children and adults may be often, at such times, going about in garments fit only for the warmth of summer. There should also on many such occasions be a fire kindled in the sitting-room.

But this is wandering somewhat from our purpose, which was, not to give details as to management, but to second the efforts of the editor in warning his readers to avoid a cause of sickness which is not known to be such, or avoided as such when known, as much as it should be. That cause consists chiefly in sudden checks to perspi-

ration, sudden changes in the weather, chilliness of the surface from want of sufficient clothing and such like conditions, all tending to drive in the blood upon the internal organs, and otherwise to derange the functions of the system.

There are several other suggestions in the article under notice, which are of value as helps to the preservation of health, such as those relating to a sparing use of fruits and vegetables, making the fruit a part of the meal, changing clothing as the temperature changes, &c.

"THE SEASON AND CROPS."—In an article with this heading on page 394 of current volume of this journal (Monthly) the writer remarks that "hay is not injured by standing in cock for several days, if properly capped," and adds that he rather thinks it better made so than in any other way. Upon this the editor makes a comment as follows; "We have no doubt but it is at least ten per cent. better. Let the grass be thoroughly wilted, or half-made, then cock it, cover with caps, and let it remain from twenty-four to thirty-six hours, then throw it open to the air and sun for three or four hours, and the hay will be as perfectly cured as it can be. It will not be brittle and break, like so many dry twigs, nor bleached until almost worthless, but soft, fragrant, and of a cheerful light green color, and full of tallow and milk, or what will abundantly make them."

Now, as not every farmer is provided with caps, (though before the great rise in the price of heavy cotton goods, which is one of the evil fruits of this wicked, fratricidal rebellion, and that accursed clinging to "the sum of all villainies," which is the fountain of the rebellion, an investment of a few dollars in these articles was usually a paying one,) we would suggest that hay can be made, and has been made, of just as bright and fresh a color, and of just as nutritious qualities, without caps, as ever was made with them. For several years it has been our aim to make hay, especially that which was all or mostly clover, in just the way described, that is, so far as putting it up in cocks when only about half-made, letting it remain so from one to three days, and opening it out to the sun and air a few hours before drawing it into the barn, are concerned. Some years ago we made hay in this way, which was the admiration of all who saw it, for its beautiful freshness and green color, and the delight of every creature to which it was offered, and when not hurried in the making of hay by weather or want of help, we have done the same repeatedly since. And what has been done can be done again. Try and see. MORE ANON.

REMARKS.—Certainly. But what if it rains some portion of nearly every day, as has been the case with us, this summer? However, we do not urge the caps, with cotton at twenty cents a yard.

PILLARS OF SAND IN THE DESERT.—The deserts of Arabia are among the most remarkable places in the world, and are especially remarkable for their pillars of sand; they are raised by whirlwinds, and have a very close resemblance in their appearance to waterspouts. The places where these pillars of sand most frequently occur, are those portions of the deserts which are near to a river or the sea. The pillars of sand in the des-

erts of Africa are very magnificent; the raised sand is in wavy and rounded lobes, which have a curling motion, like that of smoke; and both the apex of the entire pillar, and the extremities of the lobes, are shaded off to a very indefinite outline. The mirage is another very singular feature of the deserts. The traveller very frequently sees rising, as it were, before him, some great city or lovely village; he hastens onward, full of eager anticipation to receive refreshment, and ever as he goes, the image recedes from his advancing steps, and he discovers, perhaps, only too late, that it was an image formed by the refraction of the sun's rays in a particular direction, upon an atmosphere somewhat hazy and opaque.

EXTRACTS AND REPLIES.

POSTPONEMENT OF CATTLE SHOWS.

"ESSEX" asks the reasons, *pro* and *con*, for giving up our cattle shows the present year, as has been done by several societies. I am free to say that I have heard no good reason for so doing. What though our country be agitated by intestine commotion? What though money be hard to be earned? What though our young men are needed on the battle-field? These reasons, one and all, are not sufficient to justify the abandonment of the ordinary pursuits of life. On the contrary, much greater is the necessity of pursuing them more strictly. Let the middle-aged be called away, the young must stay to provide for the old and the helpless—the women and the children. In any way you can fix it, three-quarters of the whole will remain at home. The project is a mistaken one, and will never be entertained for a moment by any sound mind. Away with all such fancy stuff. CANDOR.

September 12, 1862.

CURE FOR GARGET IN COWS.

I have been a constant reader of the *Farmer* for the last ten years, and am so pleased with it that I have caused quite a number of copies to be circulated among our farmers. I would not be without it for double the expense.

A question has recently been asked, "What is a cure for garget in cows?" I feel it my duty to answer this question, and it is a sure remedy:

1. Take a piece of garget that is good, the size of your little finger, make a deep incision in the brisket of the cow, put in the garget and let it remain.

2. Take two pounds of sulphur and one of salt-petre, pulverize the latter and mix them together; give one table-spoonful twice a day in shorts or meal, the former preferred; use up this compound, and I will warrant a cure. ED. KEASOR.

Upper Gilmanton, N. H.

AGRICULTURAL EXHIBITIONS.

I perceive an effort is making in some quarters to divert attention from these to the more pressing and urgent wants of our country. It would seem to me that both can be duly regarded at the same time. All will admit the imperative necessity of doing everything that can be done for the salvation of the institutions of our country in their purity; but does it follow when we are acting hon-

estly for the advancement of agriculture, we are acting adversely to the best interests of the country? Far otherwise would it seem to me. He who learns how to make two spears of grass, or two ears of corn grow, where but one grew before, is the true patriot—in whatever field he may labor.

Sept. 20, 1862.

MAKING ICE BY MACHINERY.

The following is an account given in the *World* of a patent improved ice-making machine, manufactured by D. Siebe, Lambeth, London. This machine is in actual use in India and Peru, where it produces ice at the rate of from two and a half to six dollars per ton. The principle upon which the machine is constructed is an application of the well-known natural law, that by evaporating fluids the caloric contained therein passes off with the vapor, thereby reducing the temperature of the evaporating body. In this process a volatile fluid steam is used as an evaporating agent; a powerful pump forms a vacuum, and in its efforts to do so assists the evaporation at a low temperature on the one hand, and by pressure, with the assistance of water at an ordinary temperature, reduces the vapor again to fluid on the other hand, thereby using and re-using the same volatile fluid without loss. No chemicals of any kind are used. To talk about *making* ice in the United States may at first sight seem absurd. I am not so sure that it is so in all localities and under every condition of things. But there is a purpose to which this ice-making machinery is applied which may be deserving of attention in the United States. It is proposed to cool hospitals by this machinery on the converse principle by which buildings are warmed. It has been proved by experiment that this is practicable, the inside temperature of a chamber having been reduced to within six degrees of the freezing point, while the thermometer outside ranged at 90° Fahrenheit. In the progress of the war something of this sort may be very desirable. The machinery for making a ton of ice at a time might be carried on a large wagon.

POVERTY.—Bulwer says that poverty is only an idea, in nine cases out of ten. Some men with ten thousand dollars a year suffer more for want of means than others with three hundred. The reason is, the richer man has artificial wants. His income is ten thousand, and by habit he spends twelve or fifteen thousand, and he suffers enough from being dunned for unpaid debts to kill a sensitive man. A man who earns a dollar a day and does not run in debt, is the happiest of the two. Very few people who have never been rich will believe this, but it is as true as God's word. There are people, of course, who are wealthy, and enjoy their wealth, but there are thousands upon thousands, with princely incomes, who never know a moment's peace, because they live above their means. There is really more happiness in the world among working people than among those who are called rich.

BEECHER says: "Never chase a lie. Let it alone and it will chase itself to death. I can work out a good character much faster than any one can lie me out of it."

RETURN OF AN ARCTIC EXPLORER.

The barque *George Henry*, Capt. Buddington, arrived at New London, Conn., early on the morning of the 13th inst., having on board Mr. C. F. Hall, the Arctic explorer, whose history of his expedition is very interesting. We find the following statement in the correspondence of the *N. Y. Herald*:

He arrived in the Arctic regions late in 1860, and, as the seas were so free from ice, he was very anxious to proceed immediately with his mission; but, notwithstanding the bright aspect of affairs, he wisely took the counsel of the Esquimaux, who would not consent to make up a boat party for the purpose of prosecuting the work.

The intervening time was occupied in learning the Innuut or Esquimaux language from the natives, whom, by their contact with the whalers, he was enabled soon to understand and be understood. In the matters of clothing and food Mr. Hall adopted the Innuut style, and was dressed in skins and fed upon raw meats, with a due share of blubber.

During the long and weary winter months Mr. Hall was not idle, for with his boat he settled the fact that Frobisher's Strait was only a deep indentation or bay. On the 21st of August, 1861, he stood on the high land at the northern shore, and saw the whole sweep of land around the bay. On the 27th of September, 1861, the frail boat upon which he so much depended, was totally lost. Fortunately at the time two English whalers were in a bay—longitude 62 degrees 52 minutes west—and Captain Parker, who commanded one of them, promised Mr. Hall a boat, which he was to leave at a designated place for his use. By some means the Englishman did not leave the boat, and Mr. Hall says he thinks the ships were blown out of the bay; and yet he is anxious to hear the true history of the case. The cause of humanity demands an explanation also.

Mr. Hall returned to the *George Henry*, and learned that the schooner *Rescue* or '*Amaret*,' a tender to the barque, had been lost in the gale of the 27th September. In reference to Frobisher's discoveries, it appears that the ancient navigator and explorer entered this bay, and finding that his progress was impeded by fixed ice, supposed that it must be an open strait frozen over, and the British government has never since pushed its further exploration. The lay of the land is very different from the lines laid down upon the charts now in use. This fact is and has been known by the whalers who frequent its locality; but they supposed it to be a strait. But no official change has been made by any government.

Mr. Hall has a very large and carefully prepared chart of this bay, and will in due time publish it to the world, but at the present time he deems it proper to withhold its features.

In 1861 his explorations were renewed with energy. He had become acclimated, and was fully alive to the amount of work which was before him. A whaleboat was now procured from the *George Henry*, and with a crew of six Innuits, male and female, he started on his northern journey. The natives take their families with them when on these expeditions, and the women pull an oar with the men. Dogs are also of the compa-

ny, and several native boats are taken for the purpose of hunting and fishing with. Thus provided with *personnel* and *matériel* they started, living on prepared food in small quantities, but mainly depending upon the game captured on the way.

Mr. Hall went to Countess of Warwick Sound, and after much difficulty succeeded in discovering the place where Frobisher attempted to plant a colony. A considerable time was spent here in obtaining relics of that ill-fated colony. At nearly every place of their debarkation relics were found consisting of pieces of coal, brick, wood, and a portion of a cannon shot, which might have been used as boat ballast.

The coal had been overgrown with moss, and a dark vegetable growth; the brick looked quite fresh and new, the wood was simply chips, which, although embedded in the coal dust for nearly three hundred years, are well preserved. The piece of iron is well worn with the rust of so many years.

One of the most palpable facts in connection with the discovery of these people of "ye olden time" is that Mr. Hall discovered a trench twenty feet deep and one hundred feet long, a species of dry dock, leading down to the water. In this excavation the party of Frobisher's men who were captured by the Esquimaux on his first voyage, with the assistance of some of their captors, built a small vessel, in which they were to embark and sail for England. In due time she was completed and put to sea, but heavy weather coming on, and their vessel proving unseaworthy, they were soon obliged to return. All of this crew were severely frost-bitten. Despairing of ever reaching their native land, and being severely frost-bitten, the captives soon died.

The facts of their mode of living and attempts to reach England were gathered from the Innuits. Mr. Hall says that the traditional histories are remarkably clear and explicit, and can be relied on to the greatest extent; and I believe that those who have been familiar with this class of people coincide in the same opinion.

The information respecting the fate of two of the boats' crews of Sir John Franklin's expedition is not yet as clear as could be desired. The facts are these:

While on one of his sledge journeys in 1861—for he has made several—a party of strange Innuits came to his stopping-place, and from them he learned that three years ago two boats' crews came down Hudson's Straits, bound through the straits. These men, "cudlemas" or white men, stopped on one of the Lower Savage Islands (which lie near the mainland on the north side of Hudson's Straits,) and here they left what the Indians called "soft stones." One of the natives who knew the use of firearms, saw the "soft stones" and pronounced them to be leaden bullets. All traces of these men were subsequently lost, and Mr. Hall, not knowing that the *Kitty*, a Hudson's Bay Company ship, had been lost there five years previously, supposed these two boats' crews to be a portion of the Sir John Franklin expedition, from the fact that that regretted explorer, not knowing how long he might be detained in the ice, had laid in a very large supply of ammunition and leaden bullets, and that quantities had been taken in the boats when they left the larger vessels; and in their endeavors to get through Hud-

son's Straits, to Labrador, they had thrown away all cumbersome articles and thus the bullets came in this place. Of this matter Mr. Hall will make some further search in history before he will permit his inferences to have too great a weight in his narrative.

Mr. Hall has discovered a very large and interesting mountain of fossils at the head of Frobisher's Bay, which has furnished him the materials for an extensive scientific article on that abstruse subject.

He also discovered an immense glacier near Queen Elizabeth's Land. This he named the "Grinnell glacier," in honor of Mr. Henry Grinnell. It exceeds three thousand feet in height, is one hundred miles long and fifty miles in width.

Mr. Hall has brought home with him a very interesting family of Innuits or Esquimaux. E-bier-bing, the husband, is a fine-looking fellow, about twenty-four years of age, but he is not so large and good-looking as was Cad-la-go. Tuk-oo-h-too, the wife, is about the same age as her husband, and is the interpreter. She is the best interpreter in the Arctic regions. Her knowledge of the country and its traditions is wonderful, and any explorer would feel justly proud of her services. Tuk-er-lik-c-ta, the infant child, is one year old, and is a fine child. The father and mother went to England some years ago and were presented to the Queen. They, of course, are not so much surprised at seeing a civilized country.

RIPENING OF FRUITS.

A short article on the tomato, by Y., in our present number, is worthy of more than passing attention. The writer found that tomatoes, suffered to lie in their natural position on the ground, ripened earlier than those trained to any form of trellis. This exactly accords with our own observations. And it is in perfect unison with all that we have taught since the organization of the *Gardener's Monthly*; not, indeed, in regard to tomato culture, but in connection with the general theory of ripening fruit. Yet, there is not a more widely spread error, than the common belief that fruits must have "all the sun and air possible to ripen them early and properly."

Thus we see everywhere around us, numbers of excellent practitioners stripping their vines of foliage to "let in sun and air to ripen the fruit," and if there is one spot on the ground more sunny and exposed "to the air" than another, that spot they are sure to select for some apricot or choice fruit that they particularly value.

It seems to be forgotten that fruit ripening is in the main a vital process. Chemical action is of course essential to it; but it is dependent on vegetable life. This vitality is maintained by well-developed and healthy foliage, and this again is dependent on the general health of the plant.

All pruning is more or less detrimental to the general health of the tree. Winter pruning or summer pruning, the effect is the same. Pruning is but a compromise.

To gain a great object, we sacrifice small advantages. In pruning, that sacrifice is drawn from general health. We break off a strong shoot while green or succulent, that it may not rob a weaker one below; or, we shorten a weak shoot in winter that it may push stronger next season. Here we

gain desired advantages, but the vital force receives a shock. The more severely we pursue this course, the more we perceive the shock, till, as is well-known, we can take off leaves or shoots enough to utterly destroy the life of a tree. We prune trees at transplanting, just as we would cut off a man's leg; not because the tree likes pruning, or that amputation is a peculiarly pleasing operation, but as a part of that system of compensation which nature demands for broken limbs and broken laws. We gain an advantage, but with permanent loss.

Men like to deal with aphorisms. It is easier to follow a rule than to understand the reasoning; so if we tell a child to "take care of the pence and the pounds will take care of themselves," it will be more likely to be economical than if we read it a long homily as to the reasons therefor. So we shall perhaps, be more generally understood if we reduce all we have said to this, "take care of the leaves and the fruits will take care of themselves."

If we go into a dense wood, where the grape-vine never knew the gardener's knife, and see the vine in its massiness of foliage, rambling over bushes and trees, in dells or ravines, and where the sun's direct light never shines, our "sun and light" friends will expect to see green and unripe grapes: yet no enraptured poet ever dwelt with more pleasure on the "dark black orbs" of his fair angel, than the genuine lover of good fruit may dwell on the dark black orbs hanging in the wildest luxuriance from these extremely healthy, but sun-forsaken vines.

If we look into similar places—not, perhaps, quite so shady, for that is not its nature—and there note the fine healthy leaves of the blackberry, with its fruit black as jet beneath the still shadier foliage, and the bright shining little pearls glistening from every pip; do they not ask you bluntly, what is sunlight to them? And if you are not prepared to answer, go to the garden of some "sun and air folks," look at the hot board fence, facing due south, and tarred to make it hotter; and against it, with large yellow leaves and red ripe berries, see the poor Lawtons languishing for their native shade. Their owner considers Lawton a great humbug; and the blackberry no better than his own fence rows afford. Friend Lawton, forgive that man—while thousands bless you, this unfortunate knows not what he does!

When your gooseberry leaves fall off by mildew, the grape leaves by hail, or the pear leaves by blight; do you have gooseberries, grapes or pears? We need scarcely answer; and yet the same persons, who know they do not get good fruit under these misfortunes, by their very systems of pruning, which "lets in the sun and air," are really working to the same unsatisfactory end.

"Take care of the leaves, and the fruits will take care of themselves." Mr. Buist cleverly showed this, in an article he contributed to an early volume of the *Gardener's Monthly*. He set a novice to shorten in some shoots in his vinery, and before he saw him again, had a few vines nearly stripped of their foliage. These vines had badly colored grapes. They never had before, nor had the rest of the grapes from the point where the defoliating operation ceased.

"Take care of the leaves, and the fruits will take care of themselves." Long before Mr. Buist's article ever saw our pages, a few acute gardeners

were well aware of the importance of the maxim. If they wanted grapes to color "very particularly" well, they shaded the viney a week before the fruit ripened; "for," said they, "too strong a sunlight has a tendency to ripen leaves, and as soon as they ripen they are no longer of any service to the fruit. The longer we keep our leaves healthy, the darker and better the fruit."

We have preached on this text before, and often. Like little drops of water, our labors have not yet wore much of a hole in the stone of prejudice, as we see but too well in so many vineries, fruit-houses, gardens and orchards around us; but we have faith in water wearing its way through the hardest rock, and while welcoming such experiences as this of our "Tomato culture" correspondent, continue to teach as heretofore, "Take care of the leaves, and the fruits will take care of themselves."—*Gardener's Monthly*.

USE OF LEAVES.

In many sections of our country, oak leaves are extensively used as bedding for domestic animals. They are gathered in the forests in autumn, and stored in some convenient place till wanted. This affords them time to dry, which increases their power of absorption, and renders them more valuable in taking up and preserving the liquid voidings, and also facilitates, through this means, the decomposition of the vegetable fibre when used as a manure. That oak, or other kind of leaves, operate powerfully when spread broadcast on the surface of mowing land is unquestionable; yet this results not so much from the "astringent" matter they contain, as from their non-conducting power. We spread leaves around the trunks of trees, the blossoming of which it is desirable to retard in spring; we apply them also in "mulching," the object of which is to retain the moisture in the soil for the benefit of trees newly transplanted.

When they are spread upon the surface of grass lands, they present, to a very great extent, the action of the solar rays, and thus in a measure deprive the roots of the energizing and vitalizing influences upon which their strength and vigor very essentially depend. Whatever may be the effects produced by leaves, in their crude state upon cultivated vegetation, we see that they are eminently useful in woodlands, where, if they are removed annually, the growth is not only greatly retarded, but arrested.

In compost, also, we may often see the value of leaves tangibly exemplified, for experience has long assured us that few more really valuable accessions can be made to the compost heap or yard, than that obtained from the forest. In the cultivation of young fruit trees, this species of dressing is now greatly valued. From one to two years are required to prepare them for this purpose according to the particular use to which they are to be applied. Any kind of forest leaves will be found

valuable for this purpose. All that is necessary is to afford them time to decompose. The foliage of the alder, bass, poplar, willow and other similar trees, is more readily decomposed than that of the elm or oak; but they possess less consistence, and consequently tend less to the increase of the compost heap.

The fact is now generally well understood by practical agriculturists, that the aliment of vegetables, technically denominated HUMUS, is best produced from that class of substances from which plants derive their food. The process adopted for elaborating this important material is attained in a variety of ways; but the most direct method is by the application of substances of an animal or vegetable character in a state of active putrescence or decay. We, of course, are speaking now of organic manures, and in the list of materials shall embrace leaves. These, in addition to their organic constituents, possess also matters of an inorganic character no less essential to plants in a growing state, than the former. To illustrate this point somewhat more fully we present an analysis of leaves of the "*Early Harvest Apple*." The leaves were collected September 30, the tree bearing fruit:

Silica.....	5.775
Earthy phosphates,	
Phosphate of peroxide of lime.....	4.875
Phosphate of lime.....	1.416
Phosphate of magnesia.....	trace.
Silica.....	5.125
Phosphoric acid.....	5 359--36.775
Lime.....	36.398
Magnesia.....	0.075
Potash.....	13.179
Soda.....	11.616
Chloride of sodium.....	0.060
Sulphuric acid.....	0.137
Carbonic acid.....	15.200
Organic matter.....	2.850
	101.065

PROPORTIONS.

Water.....	54.341
Dry.....	45.659
Ash.....	4.194
Calculated dry.....	9.163

FOREIGN AGRICULTURAL REPORTS. — We learn that the Department of Agriculture at Washington is just in receipt of the supply of the First and Second Annual Reports of the Board of Agriculture of Victoria, (Australia,) which have been forwarded to the Department by I. M. MATSON, Esq., Secretary, for distribution to the different agricultural societies of the country. The Secretary, in his official letter accompanying the shipment of these valuable reports, expresses the wish to co-operate with American agricultural societies, for the purpose of exchanges of products, and the interchange of communications upon subjects which may be mutually beneficial to both countries. We learn that the reports embrace much valuable information, and will be immediately distributed by the Commissioner among the societies of this country.

For the New England Farmer.

THE ECONOMICS OF SKUNKS.

Society has learned to associate but foulness with this animal. This is gross injustice. Of the aroma of its weapon of defence I have nothing to say, other than that it is a most capital defence, and to this every man, woman and child will agree. The quadruped itself has a neatly-cut and finely-shaped head, with eyes bright as diamonds, and teeth of ivory whiteness, contrasting finely with the blackness of the hair. The skunk usually lies quietly in his burrow by day, and with nightfall steals quietly forth in search of food. The movements of the animal are very quiet, and the white portion only of his hairy coat (he wears a long-tailed one,) being visible, the mind receives a strange impression, as the apparently shapeless object flits noiselessly by. On issuing forth he greets his mates with a low, suppressed bark, resembling that of the grey squirrel; the bark, on still evenings, can be heard at a great distance, and is eagerly awaited by the country boys, who, with dog and gun, are ready for their game.

On what does the skunk feed? "Hens and chickens," exclaim half my readers. It cannot be denied that the animal has something of a weakness in this direction, therein exhibiting a fine taste, as all will allow; but then I suspect that the skunk's poultry suppers are about as rare as the negro's turkey dinner—"When Sambo gets nuffin' else he gets dem." The principal food of the animal is large insects, principally of the beetle family. When I take my morning trip to "George's lot," across the pastures, I observe numerous little holes, freshly scratched in the turf, which I doubt not were made by his skunkship during the night in search of his game. An eccentric townsman, now deceased, ranked the flesh of the skunk among his favorite dishes; whatever may be said against the delicacy of his tastes, this much is notorious, that he once imposed a cut of it, nicely cooked, on a friend, who ate it as excellent veal or pork, I am now uncertain which. I declare the skunk to be a first-rate rat exterminator—and as this is the great point in my economics, I will detail a little.

I was most sadly troubled last season with rats; they cracked my beet seed, stole my peas, gnawed my potatoes in the ground, ate my squashes on the vines, and husked and ate my seed corn as it grew; they massed under my barn, made every hole in the walls an abiding-place, yea, more, burrowed in the ground like squirrels in "George's lot," and seemed to be in a fair way of changing owners. I did the best I could with trap and poison, yet could not make a very perceptible impression on the gnawing, thieving hosts.

It became a very serious question with me—a seed-grower—this season, how I should dethrone these intruders. I rejected all manures that would tend to attract them, and prepared a good mousing cat. I hesitated for awhile as to the policy of keeping pigs under the circumstances, but finally, the quantity of waste material that could thus be changed into manure turned the scale. After putting in the pigs, I awaited the rats; a week went on and but one rat showed himself, and he was hurrying from the premises as fast as possible. This was a puzzle—who or what had banished them? About a couple of weeks ago, while pulling weeds

during a fine moonlight evening, a skunk crept quietly out from under the barn and disappeared among my bush beans, which grew thereby. The thought flashed into my mind at once—this is the self-instituted banisher of the pestiferous rhodents. I incline to the belief that the cold of winter drove the rats who dwelt in the walls and burrowed in the ground to the shelter of the barn, and when his skunkship presented himself, the whole tribe vamosed from such unsavory company. I have examined my crop in the vicinity with some care, and perceive no damage. That skunk is invaluable to me. I vote him the freedom of the premises. May his years be many.

J. J. H. GREGORY.

Marblehead, Mass., 1862.

For the New England Farmer.

STATE AND COUNTY SHOWS.

I observed in one of your late papers the following communication:

"In the published account of these, I perceive an omission of many names that I have been accustomed to see in years gone by; and what is more, that some State and County Societies have deliberately determined not to have a show or fair during the present season. This presents a question of vital importance to the farmer: Are these shows, as a whole, productive of real benefit? Or are they mere *holidays* for the gratification of the rabble? No one has taken a deeper interest in these shows, for the past *forty-four years*, than I have myself,—never having failed to be present at the show in my own county, and often in other counties and States. I should like to see the reasons for and against such shows, fairly stated. I believe the topic to be of vital importance to the agricultural community.

ESSEX."

The inquiries of your correspondent are important, and well deserve an answer. I am inclined to think that our cattle shows, as they are now conducted, are of little or no practical value. I object to the amalgamation of the horse fair and cattle show. At the horse show at Springfield, the main purpose was to test the capacity of the horse in a trial at speed. Mr. Botts, of Virginia, who was present on that occasion, remarked: "You censure us for horse-racing, but if this is not horse-racing, what is it?" The same remark applies with equal force to the trial of speed at our cattle shows. It is an attempt to *inoculate* them with the barbarism of the South. I have no doubt that the southern States rejoice to see us walk in their footsteps, and I have no doubt that they would like to have us follow their example in every other particular. It remains to be seen whether we are to follow them or they are to follow us.

I object to horse-racing because a mere race horse is generally unfit for anything else, nor is it essential to a good horse that he is able to trot a mile in three or four minutes; such high-spirited animals are generally wild and reckless, no woman can drive them, and few men would wish to do it. What the farmer wants is an animal for draft and work, one that is kind, manageable and efficient.

I object to horse-racing because it leads to betting, gambling, drinking and fighting. These are its usual concomitants at the South, and the same consequences attend it more or less at the North. A very serious affray of this sort occurred at the Concord cattle show a few years since, while this horse-racing fever was in full blast. It is thus no-

ticed by the delegate of the Board of Agriculture: "In closing this report I wish to call the attention of the Board to a transaction that occurred on the grounds of this Society, near the closing hours of its exhibition. An intoxicated Irishman, in a fit of drunken frenzy, with a dangerous weapon, stabbed two men severely, and, as was feared at the time, fatally. It is a question whether our Societies are sufficiently guarded and empowered by legislation to protect themselves from scenes of a similar character."

Some societies have offered premiums to female equestrians, who show the most skill in riding on horseback. If anything could lend enchantment to the scene, it is a display of this kind, where young lady competitors play the part of a jockey. Can it be supposed that our legislators would ever have made an annual grant to each Society of six hundred dollars, if they could have anticipated that a part of the money would be employed in patronizing the race course? In one of the slave States I noticed on the stand several young ladies, apparently the daughters of planters, who frequently bet on the horses, and if the ladies here take the lead in the race, it would not be strange if they took the lead in betting. Now what is the consequence? It draws off attention from the great concerns of agriculture, and fixes it on things which are worse than useless, which are pernicious. I object to the race, because it pampers the love of dissipation. It is a dish catered for various appetites, and will always find a good market among the rabble.

Another objection which I have to the management of the cattle show is, that those who are selected to deliver the annual address are generally persons who have no practical acquaintance with farming, and are, therefore, unfit for the task. Accordingly, some of them have broached the wildest theories which can be imagined. A few years since, one undertook to advocate the introduction of agriculture as a branch of study in our common schools. At the conclusion of his address, the President remarked that the exhibitions of the day had been the best he had ever witnessed, and in saying this I understood him to allude particularly to the address, which had just been delivered. If this be so, *ex uno disces omnes*, from one you may judge of the rest. I shall quote one or two extracts from this address, and then offer a few comments upon them.

"Botany, or the study of plants, grains and vegetables, should be a prominent study in our common schools, commenced with the alphabet and continued to graduation, so that every boy and girl fourteen years of age can not only tell the growth and food of every grain, and grass, and vegetable, but also what soil, and season, and fertilizers, are best for it. Chemistry, also, should be studied from the earliest period to the latest, as we now study arithmetic and geography. *It is vastly more important for a person to know the prime gases, than the prime numbers.*" This is more easily asserted than proved.

Again,—"Arithmetic, geography and grammar are studied to the neglect of other more important and attractive branches of knowledge. Teachers should be trained in our Normal schools, not in algebra and geometry only or chiefly, but in botany, and chemistry, and meteorology."

The idea, as I understand it, is, that to attain

any great excellence or efficiency in farming, the common schools must be converted into high schools, and agriculture must be taught there. In my judgment this is far from sound doctrine. The province of the high schools and common schools is distinct and peculiar. The division of labor must be maintained and preserved; you cannot distract and confuse the mind by a multiplicity of books and studies, without rendering all instruction faint and ineffectual.

The idea of a high school has at first something so magnificent about it, that we are apt to imagine from a liberal mode of reasoning *a fortiori*, that it is the grand concentrated essence and source of intellectual light, and that all the minor institutions of our primary and common schools are only so many opaque bodies which shine only by reflection. This is so far from being the fact, that the very reverse is true, and if these said high schools sometimes dazzle us by their splendor, it is chiefly owing to the conducting media by which the rays of light are brought to a focus.

I know not that I can more clearly express the peculiar influence of both the high and common schools upon the intellectual characters of our population, than by the force of analogy. I would say, then, that the high schools, like the foolish works of imagination, seem to have been got up for show rather than use; the common schools, like the argumentative inductions of a practical and perfect philosophy, serve to feed the mind with solid truth, and give us a rule and a guide which we may carry with us into all the business of life, and apply as often as we have occasion to act, to speak, or even think.

Indeed, there is but little danger of exaggeration in dwelling upon the vast importance of popular education; nor is it at all extravagant to assert that in civilized society a capacity to read, write and cipher seems to second the great endowments of nature by which we are able to speak, to see and hear, and ranks next in importance to them.

It was said, with truth, by Charles the Twelfth, of Sweden, that he who was ignorant of the arithmetical art was *but half a man*; but how much more wretched is that man's condition who has not even mastered the simplest elements of language, and who, from the infirmities of the mind, must be an animal, and bear the burdens of an animal all his days.

We are apt to undervalue many of our blessings from the fact that they are common, and because we have never realized what it is to be destitute of them. Profound learning was never designed to be the lot of all, no more than wealth and independence, and if you were to place the external circumstances of every individual upon the same level, in point of property or knowledge, and yet suppose them as still possessing the same old money-getting or inquisitive taste, they would not remain so a day, no, not an hour. So with what is called a high school, although the external advantage of books and the means of instruction are intended to be distributed equally to all, yet there is nothing mysterious, no magic in the place, which can ever make a blockhead a great genius.

"Pigmies are pigmies still, though placed on Alps."

The strange doctrine that the teachings of the alphabet should be intermixed with those of the high school and college, was a fit subject for ani-

madversion. Its novelty was only equalled by its absurdity. Gov. Boutwell, then Secretary of the Board of Education, was present at the delivery of the address to which I refer, and expressed his dissent from the positions which the speaker maintained and asserted. He declared that the first step in education was to learn to read, and that this was a prerequisite to all future study.

I consider it a great mistake that those who are selected to address farmers at our agricultural festivals, are either clergymen, lawyers or physicians, men who have no practical acquaintance with agriculture, and who have no sympathies with the farmer; mere theorists, who cannot say anything which comes home to their business and bosoms. Accordingly the addresses on these occasions are insipid, uninteresting, and unsuited to meet the wants and wishes of the farming community. I had rather read the *N. E. Farmer* or the *Ploughman*, than to listen to the doctrines and positions which they aim to inculcate. If we want information on any point connected with theology, law or medicine, we look to those who are professionally engaged in the study. Upon the same principle, farmers are best qualified to instruct us in farming.

I have thought, in the present state of the country, that there is a topic of surpassing interest and importance which ought to be presented to our agricultural societies. In the great struggle in which we are engaged everything cannot be achieved by our forces on sea and on land. The agricultural fraternity have a part to perform in the great work of redemption. I wished that some one might be permitted to give utterance to this sentiment, but the prejudice against farmers is so violent and excessive that if an individual intimates a wish or a willingness to express his opinion, (though no one has ever been more backward or unwilling than he, to do it before,) he is laughed at for his presumption, or denounced for his folly.

I know it may be said that this is not always the case, and that Dr. Loring is a practical farmer, and yet he has often been called upon to act in this way. He is indeed an exception, but a solitary one, and his case does not invalidate the general truth of the fact. Dr. Loring is a gentleman of learning and ability, and he has been eminently practical in his addresses to farmers, but it is believed that there are other educated men, who if they do not equal him in talent, might, *in these times*, give an address, which would be acceptable and satisfactory. It has been said that the Essex Society have never gone out of their county to obtain an orator for the cattle show, and it is a shame and disgrace to the commonwealth, that while Essex boasts of her independence, almost every other county in the State has been more or less dependent on her.

Twenty-four years ago the editor of the *Ploughman* delivered an excellent address at the Concord castle show. It was listened to with intense interest, and gave universal satisfaction. Since that time not more than one or two farmers have been invited to officiate at this festival. How is it, Mr. Editor, that we have never had a discourse from your prolific pen? You could give us one quite equal to that of the Editor of the *Ploughman*. Is it possible that you have never had an invitation?

In conclusion, I will answer the question of Es-

sex. I believe the cattle shows, *as at present conducted*, are of little practical value. If they were at once abolished, I think it would not perceptibly affect the advancement of agriculture. For myself it is a matter of no personal interest. From the infirmities of age, I have ceased to go to the cattle show, and to say the least, it is exceedingly doubtful whether I attend another. I notice that the North Middlesex Society have dispensed with their show for this year, and declined the State grant of six hundred dollars. As the State and nation need all their resources of men and money, would it not be well for the other societies to make a like sacrifice during the continuance of the war? We are contending for everything dear and sacred, we need to buckle on all our energies in behalf of the great cause. Let us rally round the flag of the Union, and inscribe on our banners,—our country, our whole country, and nothing but our country. "Liberty and Union now and forever, one and inseparable." A.

South Acton, September 22, 1862.

REMARKS.—We thank our correspondent for his communication, and agree with him in most that he has said. We certainly believe with him that some radical improvements are necessary in the management of our agricultural societies in order to make them worthy recipients of the State bounty. The same things are being done over and over again, and the State's money exhausted upon them, until the intelligent public have lost interest in the old stereotyped routine, and demand a reform. This, we think, should take place, or the bounty of the State be discontinued.

For the New England Farmer.

HUNGARIAN GRASS.

MESSRS. EDITORS:—If the little experience of one season is of any value, I freely give it, not expecting "recompense or reward." I have seen a variety of opinions expressed in the journals in regard to the successes of different experimenters in their reports upon raising Hungarian grass as a substitute for the more common approved grasses. To tell as straight a story as my decaying faculties will admit of, I bought eight quarts of Hungarian grass seed, and sowed it upon half an acre of thin-soiled land, where corn had grown the year before. This half acre was dressed with a light coat of compost of animal manure and mud, and plowed, the seed sowed and harrowed in on the 16th day of May, 1862. It being a new thing with me, I watched it from day to day; its progress was rather slow at first, but my curiosity swelled into astonishment when I beheld on the 20th day of August something like three tons to the acre (after cut and cured) mowed for fodder from my "Wilmington land." According to the best estimate we could make by weighing a part while green, there were over seven tons to the acre. This first cut was purposely for fodder before the seed had matured; the last of August we cut a small part of what was saved for seed standing, and on the 9th of September we finished the lot left for seed. The seed from that harvested 20th of August was very light, and its germina-

tion is doubtful. The seed from that cut the last of August was better, but the seed from that harvested the 9th of September was full grown and perfect. Thus we see for fodder the grass was growing from the 16th May to the 20th August, three months and four days; and for seed from three and a half months to three months and twenty-four days. We saved merely seed enough for our own land. I have found the statements of Mr. Richards, and some other of your correspondents, in regard to the quality of the fodder, to concur with my own limited observations. We have never had so universal a favorite for fodder in our barn with horses and cattle as the Hungarian grass, green or dry; they seem to prefer it to any other kind of hay. I am of the mind of your correspondent who said, "I never will sow any more oats for fodder." I have harvested as good English hay as grows anywhere, if not so much to the acre, but all our graminivorous animals give their votes for the Hungarian grass. The cultivation of the Hungarian grass being comparatively a new thing among us, I give out the few practical results of my limited experience in a report which may be instrumental in distributing a few sparks of light among farmers less experienced than myself. The introduction of Hungarian grass will make a very valuable addition to the varieties of fodder now in use for stock, it is a kind of grass which will be of first importance to farmers who occupy the sandy plains throughout the country; great crops of it can be raised on light and warm soil where it would be difficult to obtain moderate crops of other kinds of grasses.

SILAS BROWN.

North Wilmington, Sept., 1862.

For the New England Farmer.

SUPERIOR KINDS OF APPLES.

There are, doubtless, many first-rate varieties of the apple which have originated in this region that have never been propagated by budding or grafting, and are scarcely known beyond the farm where they sprung up. These should be submitted to fruit committees, and others, who are well qualified to judge of their merits, and such as are found to be first-rate in all respects should be added to the list for general cultivation. There are many second and third class kinds, now grown to some extent, which might be rejected with propriety, and their places supplied with the best of these varieties. Some of the best old kinds sometimes change and degenerate after cultivating for a long series of years, and we must obtain something among the new, equal, if not superior, to fill their places. Exhibitions of fruit at cattle and horticultural shows afford a good opportunity for bringing these new kinds into public notice. Within a few years, I have sent several varieties to an eminent pomologist, who expressed a very favorable opinion of them.

O. V. HILLS.

Leominster, Sept., 1862.

TO ONE GALLON of soft water add a pint of sugar or sorghum molasses, stir all well, and then add nearly a gallon of fresh ripe tomatoes. Set the vessel aside, and in a few days you will have the sourest pickles you ever tasted, and the best vinegar. —*Exchange.*

AGRICULTURAL EXHIBITIONS.

MIDDLESEX SOUTH AGRICULTURAL SOCIETY FAIR.

The annual exhibition of the Middlesex South Agricultural Society was held on the Fair Grounds at Framingham, and was one of the largest and finest that has occurred for many years.

The display of fruit was uncommonly large and fine, comprising 729 different parcels. The chief contributors were George W. Goodenough, of Southboro', 40 varieties of apples and 15 of pears; W. G. Lewis, 26 varieties of pears, 17 of apples; H. G. White, 15 of each; Liberty Chadwick, 20 of apples; Oliver Bennet, 12 varieties of hot-house grapes and 10 of native; James W. Clark, 35 varieties of grapes. R. A. French exhibited a large plate of apples of the Gloria Mundi variety, weighing from 8 to 20½ ounces each; and N. F. Clark, of Sherborn, a fine basket of assorted fruit.

The principal exhibitors of vegetables were H. G. White, 39 varieties; W. G. Lewis, 40 do.; Liberty Chadwick, 95; C. J. Powers, 34; Isaac Osgood, Hopkinton, 115. Mr. Lewis exhibited some German sweet turnips, raised from seed obtained at the Patent Office three years ago. They averaged 14½ pounds each when about half-grown. Thirty-seven tons to the acre have been harvested. He also exhibited a new and remarkable variety of yellow corn, that ripens before the frost, however early it may come. Mr. White exhibited nine new varieties of seedling potatoes, the only ones considered worth retaining of 1700 varieties started by Goodrich, of New York. The displays of flowers, bread, preserved fruits, &c., were very fine.

The ladies proved themselves superior in needle practice, and their display of crotchet work, quilts, knitting, plain and fancy sewing, &c., was very creditable.

The stock entries were numerous and excellent, numbering from 5 to 20 each of bulls, fat cattle, cows, heifers, yearling colts, boars, sheep, calves, &c., &c. H. G. White's stock of short-horns are extensively known, and were recently the subject of an elaborate article in the *Country Gentleman*. H. H. Peters and W. G. Lewis exhibited several Ayrshires, William Buckminster, his celebrated Devons, and F. A. Billings, his Alderneys. Of swine, Mr. White exhibited specimens of the Chester county breed, and sheep of the Cotswold variety. There were several Morgan and Messenger colts, and the usual variety of fowls.

BRISTOL COUNTY CENTRAL AGRICULTURAL SOCIETY CATTLE SHOW AND FAIR.

The annual exhibition of this new Society was held on Wednesday, Thursday and Friday. The weather was delightful, the attendance large, and the exhibition a great success.

The subjects of special interest on the first day

were the plowing-match, the show of town teams, with all the neat stock on the track,—the drawing-match, the trial of walking horses and pacing horses. Everything passed off well, and the attendance was good. The show of poultry and swine was large. The exhibition of sheep was fair for the present era of sheep husbandry. Among the stock there were some fine pairs of oxen, both working and fat cattle. A fine grade bull of the short-horn type was exhibited by the President of the Society, with other of his stock which was fine, including a pair of steer calves, about seven months old, that weigh a little short of 900 lbs.

On Thursday, the first exercise was that of the spading-match. There were five entries. This was a spirited exhibition, and attracted considerable interest. Following this, the foot-race came off, and was quite exciting. There were three that ran round the half-mile course—time 2.32 and 2.40. The third got out of wind before he came round.

The dedicatory exercises of the new Hall on the Fair Grounds came off in the afternoon of Thursday. Dr. Durfee, the President, made a brief address and introduced Leander Wetherell, of Boston, elected to deliver the dedicatory address. His subject was "Experimental Farming," and he was attentively listened to by a large audience. Prayer was offered by Rev. Mr. McDonald, of New Bedford. Music by the Bridgewater Cornet Band.

On Thursday evening there was a war meeting at the Hall, addressed by Mr. Westall and Dr. Hooper, of Fall River, Mr. Wetherell, of Boston, and others.

On Friday morning, the old board of officers was principally re-elected. The trial of working and trotting horses came off, and attracted a large crowd. The attendance during the three days was large.

The dinner was served in the Hall at 1, P. M., about 400 partaking of it. Reports were read after dinner by the Chairmen of Committees, and interspersed with speeches by the President, Jacob Dean, of Mansfield, L. Wetherell, of Boston, Dr. Hooper, of Fall River, Maj. Phinney, of the Barnstable *Patriot*, and others. The Fair closed with a sale of fruit by auction for the aid of the Society.

This, though the youngest Society in the State, is one of the most enterprising, vigorous and successful, even though deprived of the State bounty, and of a representation in the State Board of Agriculture.

This Society has purchased a farm at Myrick's Station, on the Old Colony Railway, and enclosed 45 acres of the same for the cattle show and fair, and they have erected suitable buildings thereon.

NORFOLK COUNTY AGRICULTURAL EXHIBITION.

The fourteenth yearly display of this Society was held on the Society's grounds at Dedham. The weather was beautiful, and the attendance, though not as large as upon some former occasions was very good, considering the state of the country. The show of horses and cattle was not as large, but was considered by many as more choice than upon any former occasion. Mr. W. T. G. Morton, of Needham, had a fine collection of Jersey and Ayrshire stock. Mr. A. S. Drake had some beautiful cattle—and A. W. Austin, of West Roxbury, exhibited his curious Kerry stock.

The plowing match took place at 2 o'clock, and was one of the best that has marked the Society's history. The drivers seemed to have taken a lesson from the patient beasts they drove, and went about their work with a quietness and calm method which excited general applause, and of course produced the desired result—most excellent plowing. Eleven teams engaged in the match.

The show of fruit was not large, but was very fine. The President of the Society, Hon. Marshall P. Wilder, as usual, was on hand with a fine display of pears, including 125 varieties. Mr. F. Clapp, of Dorchester, also exhibited fine apples, pears and peaches, while the show of out-door and hot-house grapes by Mr. Geo. Davenport, C. B. Shaw and J. W. Clark, of Dedham, was very fine.

The display of barn-yard fowls, both staple and fancy, was quite large.

The second day's proceedings commenced with the spading match, to which there were five entries.

After this came the cavalcade. This consisted of all the horses entered for premiums, and was formed under the leadership of Sheriff J. W. Thomas, and, led by Gilmore's Band, proceeded around the track, the line reaching nearly half a mile. There were but few particularly fine looking horses in the cavalcade, and the committee consequently withheld a large portion of the premiums offered by the Society. After the procession had passed around the track, the horses in the different classes were put through their paces before the committee.

After this came the dinner, and address by Hon. B. F. Thomas. Mr. Thomas commenced by referring to farming from the commencement of the world, when Cain went out from the presence of the Lord, and asked how many young men in our day leave the quiet of a country life, to go into the market-place and the forum, thus going out from the presence of the Lord. The exchange and the forum have many rich prizes; but in seeking these, who can gather up the golden hopes that are lost in the strife with the world? He thought there were no shares in bank or manufactory that paid better than the plowshare; for ag-

riculture, aided by science, yields enough for any man's desires. We have begun to find that there is no place for the rich man in the kingdom of rest and peace. He then particularly spoke of the visible result of agricultural labor, and said this was not only palpable, but comparatively certain. He thought the thirst for political distinction had been one of the greatest curses of the farmer. He dwelt at some length on the aid God gave the farmer, and the importance of taking advantage of this, and closed a fine address by appropriate quotations from the Proverbs of Solomon.

A very well written poem for the occasion was then read by the author, Francis P. Denney, Esq., which was loudly applauded, when brief responses to sentiments were made by Rev. Dr. Thompson, Judge Thomas, E. L. Pierce, Esq., of Milton, and a humorous report of the Committee on Swine was read by Capt. J. S. Sleeper, of Roxbury.

BROOKLYN HORTICULTURAL SOCIETY.

The number of the *Horticulturist* for September is before us, as fair and attractive as usual. It has excellent articles upon several interesting topics. In its account of the Brooklyn Horticultural Society it gives part of a report of Dr. TRIMBLE'S address on insects injurious to city trees, from which we make the following extracts:

THE ICHNEUMON.—The Ichneumon animal eats the eggs of the crocodile, to some extent controlling its numbers.

The cuckoo in England and the cow bunting in this country, lay their eggs in the nests of other birds, and the young are nurtured by foster mothers; and it is said these parasite intruders have the instinct to throw the rightful possessors out of their nests. By such a process these foster parents would be lessened the next year—a law that would react upon the parasites in the future; and we see that none of these birds become numerous. The ichneumon insect is a four-winged fly, and an immensely numerous class, of all sizes and exceedingly irregular and eccentric in shape. *They are the great regulators of insect life.*

The female deposits her eggs in, and the young feed upon, the living bodies of other insects.

It is the fatal enemy of many other insects; flies in their larva state, and even the eggs of some insects, are destroyed by them, but the caterpillars are the great sufferers. You may often see feeble looking ones, studded over the back with little protuberances; these are the cocoons of the parasite grubs that have fed to maturity upon the flesh of the poor worm, and leaving just vitality enough to last as long as it is necessary for them that they should live. These little creatures, when full grown, issue from the substance of the poor caterpillar, spin their cocoons and attach them by silken cords to their miserable victims. (Here the Doctor showed a specimen with eighty cocoons attached, and from which he had collected the flies.)

Many insects prey upon each other; sometimes diseases diminish them; birds destroy incredible numbers; toads eat them: frogs and fish consume

vast numbers of the larva of the submarine varieties; but such is the incredible rate of increase, that many kinds would overrun us, but for the wonderful check of this parasite class. The newspapers often report fearful numbers of some new insect, and forebode dreadful consequences. Such insects are troublesome for a short time, and then disappear. Some observe a periodicity, as the Locust, the Chaffers and Ephemeræ, but most of them are checked by the Ichneumon.

I have seen the stems of grapes cut off in great numbers by a caterpillar, and I attempted to see what butterfly it would come to, but I got only large, fierce looking Ichneumon flies, two from each.

Our pine forests are saved from serious injury, and the lumber from damage, by the friendly interference of an Ichneumon insect that stings the borer, while just under the bark, during the period of its transformation.

I once knew an eccentric person make a calculation, that the undisturbed increase of a single herring would, in twenty years, more than equal the solid earth, and he became nervous with the idea that we were all to become herrings. He forgot that in addition to the hundreds of enemies that prey upon these fish, besides ourselves, that the cachelot whale feeds upon them, and takes in 2,000 at a single mouthful. No. *Nothing here is allowed to take exclusive possession.* Of the hundreds of thousands of varieties of insects, none become extinct, and none are permitted to preponderate to a dangerous degree for any length of time.

When meteors and comets jostle the planets out of their places, and the heavenly system becomes disturbed, it will be time enough to anticipate that God has forgotten to regulate the insect world.

GIRDLED TREES.

Mice often produce sad havoc in young orchards and nurseries by gnawing the trunks near the surface of the ground, and not unfrequently for a considerable distance above it. This may often be prevented by compressing the first snows that fall about them, by stamping and keeping them as hard as possible until spring. If, however, from neglect or any other cause, trees do get injured in this way, watch the opportunity, and as soon as the frost leaves the surface, bank them up with soil to the extent of the injury, and allow the same to remain till the subsequent year. A new deposition of granulated matter will thus be induced, and this becoming in due time liquified, the surface will appear nearly as smooth as before it was injured. It will be well, however, before banking up to dig the soil thoroughly, if the frost will admit, and to the extent of the lateral limbs, and work in a liberal quantity of old, fine manure, mixed with a little ground bone, ashes or plaster to each tree. This will stimulate action, and cause a more rapid and abundant deposition of granular substance to heal and conceal the wound, and be otherwise beneficial to the tree. Those

who have gum shellac dissolved will do well to brush the gnawed places over with that before banking up. Many valuable trees may be saved by this process—but perhaps not all. If gnawed places are found in the winter, or early spring, they should be kept covered with snow, or wrapt up at once to prevent their becoming dry and hard. Very much will depend upon this. If girdled entirely around the tree, scions must be inserted in order to keep up the circulation. We have some interesting facts to communicate on this subject.

MINNESOTA.

We have before us a well-printed pamphlet of 126 pages, with the following title:—"MINNESOTA: Its Progress and Capabilities. Being the Second Annual Report of the Commissioner of Statistics for the years 1860 and 1861. And containing an abstract of the U. S. Census." The mechanical execution of the work reflects credit upon Mr. WM. R. MARSHALL, the State printer at St. Paul.

In a speech made by Mr. SEWARD, at St. Paul, a year or two since, he said,—“Here is the place, the central place, where the Agriculture of the richest region of North America must pour out its tributes to the whole world.” We have been greatly interested in looking over the pages of this work, and as much surprised as pleased at the wonderful resources and developments of this *new world*. Mr. J. A. WHELOCK, the Commissioner of Statistics, has embodied such a budget of facts and intelligent observations upon them as is seldom met with. The country seems to be rich in all the elements essential to a rapid growth in population and almost unbounded wealth—in minerals, timber of various kinds, in the cereal grains, in rich native grasses, in abundant water privileges and communications with the rest of the world, and in a climate highly favorable to health and the production of the great staples for sustaining human and animal life.

The following facts are collated from the official statistics of Minnesota:

Rapid as has been the growth of the new Western States, Minnesota has surpassed them all in the rapidity of its progress. Its population in 1850 was 5,330; in 1860, 172,022. Its agricultural development has been even more remarkable.

The number of acres of plowed land in 1850 was 1,900; in 1854, 15,000; in 1860, 433,267—having increased nearly thirty fold in six years.

The number of bushels of wheat produced in 1850 was 1,401; in 1854, 7,000; in 1860, 5,001,432 bushels, being nearly thirty bushels to each inhabitant, or four times as much as the whole wheat crop of New England in 1850.

The whole amount of grain and potatoes produced in Minnesota in 1850 was 71,709 bushels; in 1860 it was 14,693,517 bushels—mostly in the small grains. What a progress for ten years!

This rapid agricultural growth has been achieved chiefly since the collapse of land speculation in 1857. In 1858 Minnesota imported bread and provisions. In 1861 she exported 3,000,000 bushels of wheat alone.

Minnesota is probably *the best wheat State in the Union*, with the exception of California, and perhaps Wisconsin. The statistics of her wheat crop show an average yield in 1860 of twenty-two bushels per acre, and in 1859 of nineteen bushels—these results being from fifty to three hundred per cent. greater than that of the principal wheat States, with the exceptions noted. In 1859, for example, the average yield of Iowa was four and one-third bushels per acre; of Ohio, seven and one-third bushels. Illinois, according to a high local authority, produces from year to year not more than eight bushels per acre, and fifteen bushels is considered an unusually large average for the best wheat States. The comparative exemption of Minnesota from the disease and insects which ravage the wheat crops of other States, gives it a great advantage in the cultivation of this most valuable staple.

Minnesota is often supposed to be too far north for corn. This is a great mistake, founded on the popular fallacy that the latitude governs climate. But climates grow warmer towards the west coasts of continents, and although its winters are cold, the summers of Minnesota are as warm as those of Southern Ohio. It may surprise some readers to know that the mean summer heat of St. Paul is precisely that of Philadelphia, five degrees further south, and that it is considerably warmer during the whole growing season than Chicago, three degrees further South. The products of the soil confirm the indications of the Army Meteorological Register. The average yield of corn in 1860 was thirty-five and two-thirds bushels per acre, and in 1859—a bad year—twenty-six bushels. By comparison, in the latter year, Iowa produced but twenty-three and one-half bushels per acre, and Ohio, the Queen of the corn States, but twenty-nine bushels. In Illinois—of which corn is the chief staple—Mr. Lincoln, now President of the United States, in the course of an agricultural address in 1859, stated that the “average crop from year to year does not exceed twenty bushels per acre.”

HENS EATING EGGS.—A writer in the *London Field* says that hens eating their eggs is often owing to the form of the nest, and suggests that the proper form is that of a plate, shallow, that she may not have to jump down on the eggs, and flat on the bottom, so that when she treads on them, they will roll aside, and let her feet slip easily between them. She can then pass her bill among them, as she tucks them under her, and shuffle them together with her wings without hurting them. If, on the contrary, the nest is made in the form of a basin, the eggs press against each other, and are liable to be crushed by her efforts to push her feet between them, or to alter their position with her beak or wings. When an egg is broken, most hens will eat it, and, as hatching time approaches, the eggs become more brittle; and in a deep or badly-formed nest, the chicks are very apt to be crushed and killed between the other eggs, by the movements of the hen.

For the New England Farmer.

OBSERVATIONS ON DRAINAGE.

BY JUDGE FRENCH.

Since my treatise on Farm Drainage was published, three years ago, I have carefully watched all the drainage operations that have come within my sphere of observation, as well as the published statements in the agricultural journals, and especially in the Transactions of Societies, and no single instance has come to my knowledge, where even a tolerably well conducted experiment in drainage has proved unsatisfactory to the proprietor. Indeed, the fact, that almost any poorly conceived, and half-executed plan of drainage, produces such wonderful results, is an obstacle in the way of the most thorough and permanent, and in the end, economical execution of the work. A farmer, who has run a few open two-foot ditches through his meadow, triumphantly points out to you the perfect realization of his idea of successful drainage, and another, who has filled a like ditch two-thirds full of roadside stones, and covered it with shavings and soil, exhibits his field as a new evidence of the importance of underdraining. All this is well, if the same labor and expense would not have done the work better. Any drainage, like any plowing or any manuring for a crop, is better than none at all, but let us keep the standard at its proper height, and work as nearly up to it as practicable, and let no man flatter himself that anything less than tile drains four feet deep is really the best drainage. Stone drains are just as good as tiles, if they can be kept open, but unless very deep, so as to be below frost and the operations of moles and mice, they are likely to be obstructed, and when once obstructed, cannot be repaired.

THE OBJECTS OF DRAINAGE

may be briefly stated thus: 1. To remove stagnant water; which is, for some reason not easily defined, poisonous and destructive to all valuable grasses and cultivated crops. 2. To deepen the soil, and so afford to the roots of plants a larger pasture or feeding ground. 3. To promote pulverization of the soil, so as to allow the roots to traverse far and wide and to find their appropriate nourishment in its proper condition. 4. To prevent surface washing; by allowing rain and snow water to pass through, and not over the soil. 5. To prevent freezing out of grass, grain, and even shrubs and trees; by allowing the water to pass quickly down, instead of freezing near the surface and expanding by crystallization, and so tearing the roots from the soil. 6. To lengthen the season for labor and for vegetation; making what was before a late soil in spring, the earliest for working, and giving all the autumn, till the ground freezes, for fall tillage or improvement. 7. To

save, on moist land, twenty-five per cent. of the labor of cultivating; heavy soils being rendered by thorough drainage, almost as easy of cultivation as naturally light land. 8. To promote the absorption of fertilizing substances from the air; and so to get your share of the exhalations from your neighbors' manure heaps, as well as from the swamps and cities. 9. To supply to the roots of plants, air; which is necessary to their very life, and which must follow the rain water as it descends towards the drains. 10. To warm the soil, which can never be warmed while filled with water. Heat cannot be propagated downward in water. No degree of heat applied to the surface of a vessel of water, can warm it at the bottom. Heat passes through water by the circulation of its heated particles, which, being made lighter by heat, always go upward. The only way to warm the soil in the spring, is by allowing the snow water to pass down and warm water or air to take its place. A rain storm of boiling water on soil saturated with cold water, could not perceptibly warm it three inches below the surface. 11. To render the soil more moist in times of drought; a pulverized soil holding, by attraction, much more water than a lumpy or compact soil, as is readily proved by the fact, that water may be squeezed from a moist, light soil, as from a sponge, even by hand pressure. 12. To prevent injury by drought, also, by causing the roots to strike far deeper in early spring, than they can do in wet soil, thus giving them an equal moisture throughout the season, instead of floods in spring, which prevent expansion of roots, followed by a lowering of the water-table beyond their reach.

These advantages of drainage are all real and intelligible, and may be greater or less, according as the particular field under consideration may be more or less moist. It may be added, that all fruit-growers and nursery-men seem to agree, that stagnant water, even in winter, is very injurious, and that standing even in that season with their feet in cold water is destructive to fruit trees.

WHY TILES ARE BEST.

Tiles are getting to be abundant in many parts of New England, and as there is no reason why they may not be made wherever common bricks are made, any demand for them will soon be met by a supply. Where tiles cannot be obtained at reasonable rates, it may be often expedient to use stones. There is no one advantage, that a stone drain possesses over a tile drain, and no reason can be given for using stone, except economy, which is a point presently to be considered.

Tile drains are better than stone. 1st, Because they are more permanent and reliable. No mole or mouse, or insect large enough to do any harm, can enter a tile drain properly laid and secured. A

stone drain cannot be laid without cement, or hammered stone, so that moles and mice, snakes and other *vermin*, as the English call such creatures, cannot enter, and they all, at once, establish communication between the drain and surface. When such tiles are opened, the water runs in from the top, carrying soil and sand, and the drain is filled up and ruined, and it is often more work to take it up and relay it, than to lay a new one.

Tiles, it is true, are liable to obstruction. Sand may find its way into them, even through the very small cracks at their junction, and fill them entirely. Frogs and moles may enter at an ill-secured outlet, or a soft or cracked tile may fail, but these obstructions are very rare, and very easily removed.

The water will show itself above the obstruction, and by thrusting down a crowbar along the line of the drain, it is easy to ascertain, by the rising of the water in the hole, where the obstacle begins. Then it is very little labor to dig down to the tiles, and take them up, so far as they are filled, and replace them after cleaning. Usually these obstructions extend but a short distance, and as there is nothing to be carried away or brought upon the field, except perhaps a single tile, the soil and even the sod may be replaced without injury.

2. Tiles are cheaper even at \$15 per 1000, than stones lying on the field. This is a matter of calculation, not of mere opinion. The saving in tile drains is in the cost of excavation mainly. The English workmen open four-foot drains, with a mean, or average width of 10½ inches. We will call it 14 inches, and the cost a third of a dollar per rod for digging and filling. The tiles at \$15 per 1000, cost 25 cents per rod, making the cost of the drain 58½ cents.

Now a stone drain must be nearly double this width, but we will call it only 21 inches, making the digging and filling cost, at the same rate, 50 cents. The ditch will require two ox-cart loads of stone, and saying nothing of the picking and hauling, it is worth 25 cents per rod to lay them in place, which makes the labor 75 cents per rod, saying nothing of two cart-loads of surplus earth to be hauled away.

In other words, this, I think, is true, that the labor of constructing stone drains will cost more than the labor and tiles for tile drains.

DEPTH AND DISTANCE.

I advise laying drains as deep as four feet, not only because they drain the soil better, but because they are more permanent, than when more shallow. At that depth, the soil is little affected by vermin, or by the tread of cattle, or by the plow, or by frost, and holes are not likely to be broken through from the surface, to admit water

and earth. I advise the use of two-inch tiles as the minimum, not because a smaller bore would not carry the water, but because it would be more easily obstructed. The distance must depend on the depth in part, and in part upon the nature of the soil. I have never yet seen a failure in drainage, from drains at proper depth, too far apart. From 30 to 60 feet may perhaps be given as extremes, in New England, where we have little close clay. In England, tough clays are sometimes drained as close as 16 feet.

ENGINEERS.

Drainage is expensive, and mistakes are too costly for the farmer. A day's labor of a competent engineer will often save five times the cost. No man can, by the eye, properly estimate the fall in even a single acre, and a practiced hand can lay out work far better than any unpracticed farmer. The first step must always be to lay out the work, and although I have had much practice myself, I should not dare to attempt any extensive drainage even on a five-acre field, without an engineer with his levelling instruments.

The autumn is a leisure and convenient time for these operations, the only objection being that there may be too much water before the tiles are in, but we have usually many weeks after the middle of September for field operations. The subject is of great importance on all the old and valuable fields of New England, where there is too much moisture at any season.

For the New England Farmer.

AGRICULTURE IN OUR COMMON SCHOOLS.

MR. EDITOR:—I read the communication from Mr. Goldsburly upon the above subject, when the *Farmer* of July 12 was received, and have perused it with more care and attention since reading the "strictures" upon it which appeared in your paper of August 30.

The clear and comprehensive manner in which Mr. G. treated the subject under consideration, I think did not indicate that his "usual good judgment" was "asleep," but that he was in the full possession of all his faculties, though other persons may entertain a different opinion. It seems to me his objections are sound and sensible, and show that the writer understands the object for which our common schools are designed, is well acquainted with their condition, either by experience or from observation, and knows their wants and failings.

If I am not mistaken, there is a general feeling in the community, that for some years past, too many studies have been introduced into our common schools, to be learned thoroughly, while some of the fundamental branches, such as reading, spelling and writing, are so much neglected, that comparatively few boys and girls who arrive at years of maturity can be called really good readers and writers, at least so far as correct spelling and composition are concerned.

In such schools as the State establishment at Westboro', and others of a similar character, agriculture of course can be taught *practically*, but our common schools in the summer season, as is well known, are under the care of female teachers, and in the winter no practical application could be made of any principle connected with farming, except perhaps in some places the older boys might *practice* preparing green wood for the fire, as "Jonas" did when the famous "Memorious" was sent out to spell him."

"More Anon" says it is implied or understood throughout the remarks of Mr. G. that if agriculture is introduced into our schools as a study, *all* the scholars would be obliged to attend to it. I find nothing in any of the objections to justify such a conclusion. But perhaps my *perceptive* faculties may be slightly impaired.

A. C. W.

Leominster, Sept., 1862.

For the New England Farmer.

"AGRICULTURE IN COMMON SCHOOLS."

Ever since the publication of *The Progressive Farmer*, by Prof. J. A. NASH, in 1853, the question as to the expediency or probable utility of introducing agriculture as a study into our common schools has occupied the attention of the writer, and doubtless of many others, every now and then. In his preface to that excellent little manual, in which the more important facts and truths of agricultural chemistry and geology, and of what is known in regard to the plants and animals, the soils and manures, with which the farmer has to do, are very plainly and clearly stated, and made available for practical application to every-day operations on the farm, Mr. Nash informed the public that his work was the result of an effort to render science—that is, well-established and systematic knowledge—available to practical farmers, to young men desirous of qualifying themselves for so useful an employment, and *especially to the more advanced classes in our public schools*. This announcement of his intention to have his book used in public schools, in connection with a trial of a portion of it in our own fireside instruction, first started in our mind the question as to the expediency, benefits, or utility of having it regarded by teachers and parents as one of the studies which might be attended to by those who wished it, in our common schools.

In a few months after the publication of the above-named work, and while engaged in using it as a text-book for instruction at the fireside, the new edition of Johnston's "Elements of Agricultural Chemistry and Geology," by the editor of this journal, made its appearance, and was found by the writer to be a most admirable aid in making the study of Mr. Nash's manual at once more interesting and more instructive. By the help of the *very copious* index attached to that edition, it was very easy for either the student or instructor to turn at once to the pages in which might be found the remarkably lucid, practical and interesting statements and illustrations of Prof. Johnston, in regard to any subject treated of in our text-book. And so very plain and interesting to the student was this book found to be, that it has seemed there could scarcely be a better one for the study of the more advanced classes, if it were as

well fitted for the purpose of recitation, or for use as a text-book, by appending to it a catechism or set of questions, as it now is for ready reference by its very copious and really useful index. So useful, however, did the writer find this book, and so well adapted to interest as well as to instruct one young mind, that it served to bring up afresh the subject of the expediency of introducing *some* branches of agricultural science as a study, for those who might choose it, or whose parents might choose it, in our public schools.

So great had thus gradually become my interest in this question, and so great my desire that a text-book *more exactly* adapted to the capacities of the young might make its appearance, that I was at once induced to procure and examine, with this object in view, the "Rural Handbooks," prepared and published by Fowler & Wells in 1858. These I found better adapted for study and reference by young farmers, and those who had never made themselves acquainted with the *principles* of farm operations, than for youth at the age they usually attend school. Still it seemed that a very good text-book for the more advanced pupils—say in the last year of their attendance at school—might be prepared, by re-writing, with this special end in view, two of these hand-books, viz.: "The Farm" and "The Garden."

Again, when in 1861 it was announced that a manual of agriculture for the use of schools was in preparation, and when soon afterwards it was given to the public with the sanction and approval of the State Board of Agriculture of Massachusetts, —a State which has always taken the lead and held the foremost place in all educational concerns—I hoped that the expediency of such a study in schools was now generally felt and acknowledged, and felt persuaded that a text-book as good as we were likely to have for many years, was now within the reach of all who were independent and progressive enough to venture upon the innovation. And although it seems to me that this "*Manual of Agriculture*," by Emerson & Flint, might have been more likely to *interest* the young, had illustrations from orchard and garden-culture,—with which *all* children are more familiar than with operations on the farm,—been more frequent, still I think any teacher of intelligence, and *ambitious to do his very best*, might, with this manual as a text-book, and by consulting the agricultural books and papers which he could scarcely fail to find in any school district in which there were parents intelligent and progressive enough to furnish a class for such a study, extemporize illustrations from the things with which all children are more or less familiarly acquainted, so as to make the teachings of this text-book both more interesting and more likely to be remembered, as well as ready for practical application. Indeed, wherever there are parents intelligent enough to appreciate the truth, so pithily expressed by Milton, namely, that

"To know that which before us lies in daily life
Is the prime wisdom,"

and sufficiently judicious and energetic to regulate the education of their children by that and other cognate truths, so that their employments during their school life shall be the best possible preparation for their employments in after life; wherever there are in any school district such parents having children enough among them of the proper

age to form a class of sufficient size, and they shall consult together and combine for the purpose, there seems *now* to be nothing in the way to hinder the expediency of this new branch and study in schools being put to the test of experiment, save only to secure a teacher of ordinary intelligence, and possessing ambition to do his very best for the interest of his pupils and his employers. And with such parents, and such a teacher, (no more than all teachers are in duty bound to be,) and such a text-book, and such aids as have been referred to as available for the assistance of the teacher, it seems as if the experiment could no-wise fail of proving a most gratifying success.

Surely, such parents as I have described will not allow themselves to be deterred for more than a few minutes by any such objections as those which have been submitted by Mr. Goldsburly in the issue of this journal for July 12th, and in the August No. of the monthly edition. The statements which appeared to him, doubtless, to be arguments of great force and validity, have been shown to be nothing more than unproved *assumptions* and erroneous assertions, in the *Farmer* of August 30th. It was there shown, in opposition to one of the assumptions of Mr. G., that there is *no good reason* for any such limitation of school studies as he insists upon, that with scarcely an exception, any study may occupy the time of children during their school life, which may serve to develop and invigorate, or discipline the mental faculties, and also to furnish the mind with stores of knowledge likely to be useful in the general business of adult life. This being the principle or rule by which the appropriateness and value of any study are to be tested, what could justly be ranked more highly than a study so intimately related to the life-business pursuits of a large majority of the American people? There are, certainly, several of the studies to which Mr. G. would limit youth in our common schools, which are of small value, and are likely to yield results of little importance, when put into comparison with the knowledge of "that which before us lies in daily life," and which the study of agriculture, *in all its branches*, is so well adapted to furnish to every attentive and inquiring mind.

This will appear more obviously when it is considered that agriculture in all its branches, or even as it is presented in the brief "Manual" of Messrs. Emerson & Flint, leads the student to a knowledge of the more practical and important portions of the sciences of meteorology, climatology, chemistry, botany and vegetable physiology, geology, zoology, entomology, &c., and to a knowledge, also, of whatever comes under the usual appellation of gardening, orcharding, husbandry, rural economy, domestic economy, &c., &c. If, then, the *best use* of schools is to prepare the young for the duties, offices and employments of adult life, what could be named as a more appropriate school study than that which leads to a knowledge of these most common, most important things?

Again, it was shown in the *Farmer* of August 30th, that it is assumed or implied, in all the objections urged by Mr. G., that the study of agriculture, if introduced into schools, would be obligatory upon all. On the contrary, it must be manifest to all not blinded by biasing influences of some kind, that it would be a study perfectly elective, like algebra and several others, and that

it would be chosen only by or for the more advanced pupils. But we must not repeat what has already been said on this matter; but refer the reader to the article above referred to. All who read carefully and candidly that article replying to the objections of Mr. G., will see that if the study he objects to is to be, and to be universally considered, an elective one, not at all obligatory upon any one, then all his objections are void and of no force whatever.

To this refutation of the objections of Mr. G., in the *Farmer* of August 30th, he has not yet seen fit to reply. True, he has written a notice of the article in the *Farmer* of August 30th, which is printed in the issue for September 20th. But this notice of his consists only of certain utterances of a resentful nature, as if greatly offended by having his opinions called in question; and as the public care little about the bickerings of disputants who tread on each other's tender toes, I leave all Mr. G.'s personalities and accusations without reply, and would only remind him that the public care only about the *points at issue* between us, and not whether we wound each other's self-esteem, or otherwise. We wait Mr. G.'s reply.

MORE ANON.

THE CATTLE MARKETS.

The close of the first year of the services of our present reporter seems to be an appropriate occasion for a review of some of the facts which are embodied in his weekly reports.

According to his figures, the number of live stock at market during the year ending September 30, 1862, is as follows:

Cattle of all kinds.....	90,153
Sheep and lambs.....	208,592
Shotes and pigs.....	46,080
Fat hogs.....	44,790
Veal calves.....	8,000

The following table shows the numbers of cattle and sheep from the "North," and the number from the "West," arranged by Quarters, with the average number of each per week. The Northern or Eastern includes those from the New England States, the northern part of New York and Canada, and the Western, those purchased in Albany, and those that come direct from the Western States.

Quarter Ending	CATTLE.			SHEEP.		
	North.	West.	Total.	North.	West.	Total.
Dec. 31, 1861,	23,535	6,980	30,515	51,048	4,142	55,190
Mar. 31, 1862,	8,534	7,228	16,062	21,146	13,755	34,901
June 30, "	5,994	11,039	16,133	32,673	2,121	34,797
Sept. 30, "	15,413	11,725	27,143	81,200	2,414	83,704
Total for year,	53,181	36,972	90,153	186,157	22,437	208,592
Aver. per week,	1,923	711	1,734	3,530	431	4,011

For the purpose of arriving at some conclusion as to the value of the stock sold at this market for the year past, we assume the sales of Northern and Eastern cattle, large and small, to average \$35 per head, and the Western \$60 per head; Northern or Eastern sheep and lambs, \$3.62, and Western \$4.25 each; shotes and pigs \$4, fat hogs \$8, and calves \$4.50 each, and multiply accordingly. The following result is offered as an ap-

proximation to the total value of live stock sold at this market during the past year :

	North.	West.	Total.
Cattle.....	\$1,861,335 00	\$2,218,320 00	\$4,079,655 00
Sheep.....	673,888 34	95,348 75	769,237 09
Shots and pigs....		184,320 00	184,320 00
Fat hogs.....		358,320 00	358,320 00
Veal calves.....	36,000 00		36,000 00
	\$2,571,223 34	\$2,856,308 75	\$5,427,532 09

An average of \$104,289 per week, the year round.

Prices for beef cattle have been, we think, remarkably uniform during the year past. The range of our weekly quotations has been from \$3,75 a 6,25 to \$5,75 a 7,25. And this, it should be stated, represents the variation in quality as well as price.

During October, November and December, the highest quotation was \$6,50 for nine weeks, and \$6,25 for four weeks.

During January, February and March, the highest quotation was \$7 for three weeks, \$6,75 for seven, \$6,50 for two, and \$6,25 for one week.

During April, May and June, the highest quotation was \$7,25 for one week, \$7 for nine weeks, and \$6,75 for three weeks.

During July, August and September, the highest quotation was \$7 for one week, \$6,75 for seven weeks, and \$6,50 for five weeks.

Sheep have sold higher than usual this year. During the first quarter, sheep and lambs were sold in lots or flocks, by the head at from \$1,75 to 4,00. During the second quarter, they were sold mostly by the live weight at from 4½ to 6c per lb. During the second and third quarters, at from 3 to 6c per lb., many being clipped.

Stock at Market,

TEN, TWENTY AND THIRTY YEARS AGO.

The following table shows the number of Cattle, Sheep and Swine reported at market the first week in October, 1862, 1852, 1842 and 1832.

	Oct. 3, 1862.	Oct. 7, 1852.	Oct. 3, 1842.	Oct. 1, 1832.
Cattle.....	2,809	3,820	1,680	1,905
Sheep.....	8,557	12,500	450	4,000
Swine.....	2,550	3,100	1,550	610

Prices,

TEN, TWENTY AND THIRTY YEARS AGO.

	Oct. 3, 1862.	Oct. 7, 1852.	Oct. 3, 1842.	Oct. 1, 1832.
Beef, extra....	\$6,50 a 6,75	\$6,25 a 6,50	A few at \$5	\$5,25 a 5,50
1st qual....	6,00 a 6,25	5,50 a 6,00	\$4,50 a 4,75	4,84 a 5,17
2d " "....	5,25 a 5,75	4,75 a 5,25	3,75 a 4,25	4,25 a 4,50
3d " "....	3,75 a 5,00	4,00 a 4,50	3,00 a 3,50	3,50 a 4,00
Wk. oxen, pr..	\$50 a 120	\$55 a 92	Not quoted.	Not quoted.
Cows & calves.	20 a 50	20 a 39	Not quoted.	\$15 a 28
Sheep & lambs.	2,50 a 3,75	1,88 a 3,50	62 a 2,00	1,33 a 3,00
Swine, stores..	3c a 5½	6c a 9¾	2½ a 3½	4c a 4½

These facts are gleaned from the reports of Brighton market which have been published in the *Daily Advertiser*, and its predecessor, the *Daily Patriot*, for a little over thirty-two years, previous to which it seems that farmers and drovers in the interior depended for their information as

to the state of the market on mere rumors, private letters, or an occasional notice in the newspapers, like those so often seen in relation to crops in the West or elsewhere, written sometimes, perhaps, by an interested party.

Of these occasional statements or reports, the following, which we find among the items of news in the old *New England Farmer*, of February 9, 1827, will serve as a specimen :

"The number of cattle at Brighton on Monday of last week was about 600. Many of them were sold at from \$3,50 to \$4,00 per hundred, a few went from \$4,50 to \$5,00, and a very fine pair of oxen from Hatfield brought \$5,25. For several weeks past about twice as many cattle have been driven to Brighton as were required to supply the market. Prices will be low as long as this glut continues."

The old Boston *Daily Patriot* was the first paper to employ a regular reporter of the Brighton Cattle Market. The first of the series of weekly reports which has been continued to the present time, was printed in the commercial column of that journal, Wednesday, June 3, 1829, and is as follows :

"BRIGHTON CATTLE MARKET, MONDAY, JUNE 1.—The number of beef cattle 120; sold from \$5,50 to \$6,50 per cwt., all sold by 9 o'clock, A. M. The sales were fifty cents per hundred higher than any preceding week for the year past."

In a few weeks these reports assumed the form, substantially, in which they are now published, and being evidently the work of an intelligent and impartial person, they were at once, as they ever have been since, copied into the weekly papers in New England, and were much relied on by all parties interested in the market.

But as agricultural papers became common in New England, farmers began to demand a more full report of a branch of trade in which they are most directly interested. To meet this demand we have volunteered to step out of the beaten track, and instead of a stereotyped paragraph, now give a whole column to a detailed report of the great weekly Cattle Fair of New England.

We apprehend that the amount of business transacted at this market is not fully appreciated by the public. Few even of those who are dependent on it for the sale of their surplus stock, or for the purchase of their meat, have the means of knowing the amount of business weekly done here. Nor is it so easy a matter as it might seem to be, to ascertain this fact. In the first place, the markets here were not established, but they grew; and that without being cramped or fettered by the By-laws and Regulations of any Board of Overseers, and subject to no other rules than such as buyers and sellers tacitly adopt.

Many people, probably, think, of the opening of

a market as they do of the opening of a store,—the “goods,” in either case, being previously arranged in order for the reception of customers.

But this is quite incorrect. Dealers in stock at this market do not wait for the “clerk” to open the gates, nor even for the cattle to be yarded, but are always ready for the first chance to trade, whether occurring Tuesday, Wednesday or Thursday, or whether presented in the cars, at the landing-places, on the highway, or in the yards, at Medford, Cambridge or Brighton.

To watch well the market, therefore, one must needs post himself at the several steamboat wharves in Boston, at the cattle-stations on the Lowell and on the Eastern railroads, as well as at those in Cambridge and Brighton, besides keeping a look-out for droves by land; and this not for a single day only, but for the three market-days above-mentioned.

A business “opening” upon such an extent of territory, and continuing through one-half of the working-days of the week cannot of course be seen in its full proportions from a single point of observation, nor is it strange that its amount and importance should be underestimated.

From such a field are the materials which make up our weekly reports of the cattle markets gleaned; and a year’s experience therein, it is believed, will enable our reporter to make his labors for the future more satisfactory to himself, and more valuable to others, than those for the past year have been.

FRUIT AS A MEDICINE.

Ripe fruit is the medicine of nature. Nothing could be more wholesome for man or child; and although green fruit, of course, almost as fatal as so much poison, the ripe is fully as thorough a health restorative and health preserver. Strawberries are favorites with all classes, and constitute a popular luxury. But who can compute the amount of general health promoted by this relish for strawberries? Who can imagine how many pills that relish throws out of the market; or, in other words, to what extent these pills prepared by mother nature, and sugar-coated, as it were, to render them more palatable, crowd out of use those prepared by the chemist and the apothecary? Who can tell the number of disordered livers, deranged stomachs, and afflicted digestive apparatus generally, the grateful acid of that delicious fruit gradually restores to a sound condition, mocking at all the skill of the ablest physician; vindicating the simple laws of Hygiea by their radical action, and teaching us how often a panacea for some of the most painful of human maladies lies directly at our feet, and is contemned because it is so unassuming?

After strawberries, we do homage especially to peaches and apples. They are the kind of drugs that cost comparatively little and do comparatively much, when the patient is not too far gone for the use of such pleasant medicaments. We knew a person once who, believing himself in a decline,

and having been completely worn out in patience by the experiments of his doctors, determined to eat from four to six ripe apples every day, and note the result. In three months he was well! We know of another who, without being afflicted with any particular disorder, was never in good health, and for twenty-five years could scarcely be said to enjoy a single week’s exemption from suffering. He then commenced the habit of drinking a glass of plain cider every morning, and for the next twenty-five years never had a single day’s illness. Such remedies are simple enough!

For the New England Farmer.

NOTE YOUR PROGRESS---SHEEP.

The yellow leaf betokens that the close of our tilling the soil is drawing near for this season. When that period arrives, would it not be well for our brother farmers who have made note of their progress through the year, to give us the advantage of their experience, so those of us who are unlearned, can learn. In my turn through the orchard I find that those branches of the fruit trees that run up, take up most of the sap at the expense of those running downward; the latter consequently languish. I also remarked certain trees which seemed as if they possessed some knowledge, for they were careful to guard and protect their fruit, as a woman does her little children. Among the vines and gourds certain leaves had grown and arranged themselves so as to cover the fruit, lest, perchance, the cold might destroy them. The rose tree and gooseberry bushes, to defend themselves against any who might wish to strip them of their buds, had put forward defences of sharp spines. But I marveled not at the foresight of God, for He said, that even the birds have their share in His protection, and fall not without His will.

In the meadow I see the lambs frolicking and kicking, leaping and sporting, also the shorn sheep, but their inferiority in point of size to those of the time of Herodotus, the historian, leads me to think that, perhaps, they of that time might be better posted, than we of the present day, although *Vermont* flocks of her superior breeds of sheep. Raising flocks was one of the first employments that our progenitors followed, we are to infer, for it says, Gen. 4: 2, that Abel was a keeper of sheep. Of the importance of sheep, no one questions. In sacred history, as well as profane, this is duly noted (down to the present day.) In no place do I find much as to the form and size of sheep until the time of Herodotus, who speaking of the sheep of Arabia, says they have tails not less than three cubits in length, in breadth nearly a cubit! I have not the skill to tell the exact size of an animal by one part, as some have, but I am part *Yankee*, therefore I am allowed to guess; but before proceeding further, let us see what the word cubit implies. The word cubit is derived from the Latin word *Cubitus*, (the lower arm;) it used to denote the distance from the elbow to the end of the little finger. The length differs in various nations according to the stature of the people. The distance in men of average size is the one in use. The lesser, or common cubit, is 18 inches, the Egyptian, or which is probably the Hebrew, was 21. Now take the least, 18 inches.

Three cubits long, equal to $4\frac{1}{2}$ feet, such would be an useless appendage to the sheep now extant. God in all His works, designed all for some use, therefore, we should infer by the length and breadth of those now extant, that those of former days must exceed ours in size some three or four times. Perhaps then the lineage of that highly-prized breed styled the flat-tailed sheep, might be traced to those of olden days; if so, why not, in the days of improvement which we now claim to live in, bring the breed of sheep up to the size of former days? How can our young men of this day affect to despise country places and the art of agriculture, which our old, honest ancestors and prophets themselves did not disdain to exercise, even to keeping flocks? S. V. M.

Capé Elizabeth, Sept., 1862.

A NEW KIND OF BRICK.

A correspondent of the *Journal of the Illinois State Agricultural Society* thus speaks of a new method for making brick:

The amount of lime is ten bushels of good stone lime, burnt but unslacked, to one thousand brick. The brick are plump four inches thick, six inches wide and ten inches long. By getting the cubic measure of a thousand such brick you will have the amount of material for their foundation: but little allowance is made for the lime, as it adds but trifling to the bulk. The ten bushels of lime are slacked and diluted as for mortar, and then passed into the box containing gravel and sharp sand—these are well commingled together—and then passed into a mould where the brick is subjected to a pressure of, I think, 5,000 lbs., but I am not quite certain. It is then taken out carefully and laid away to season, and must be protected a few days from heavy rains. The wall is laid ten inches thick, on a deep, firm foundation. The brick is laid edgewise in the wall, leaving a hollow space between the outside and inside courses, except where ingeniously tied by placing the brick lengthwise across the wall. The air space is intended to benefit the brick and the building. I think I could secure you, for a short season, a choice mechanic, competent to superintend, in all particulars, the introduction of this new material, and its best mode of construction, on reasonable terms. We have a number of buildings in this section of this description. I like them well, and think that for the sparsely timbered portions of your country it must be decidedly the best style of building; and so warm the bleak prairie."

TO PRESERVE CIDER.—The following recipe for preserving cider was tested last fall by a friend, and found to be all that is claimed for it: "When the cider in the barrel is in a lively fermentation, add as much white sugar as will be equal to a quarter or three-quarters of a pound to each gallon of cider, (according as the apples are sweet or sour,) let the fermentation proceed until the liquid has the taste to suit, then add a quarter of an ounce of sulphite (not sulphate) of lime to each gallon of cider, shake well and let it stand three days, and bottle for use." The sulphite should first be dissolved in a quart or so of the cider before introducing it into the barrel of cider.—*Prairie Far.*

THE CONCORD RIVER MEADOWS.

We have had recent occasion to be upon these meadows considerably, and to witness the annual destruction of property occasioned by the standing water upon them. This mischief we have no doubt is caused by the dam across the river at North Billerica, which stops the natural flow of the stream, and throws the water back over an immense tract of land that would otherwise be among the best in the State.

The river being unusually low, we went into the meadows with a gang of men and teams, and by the use of broad cart-wheels, rackets on the feet of the horses, and the wheelbarrow, succeeded in getting a few hundred loads of muck out upon higher land. Near the river the soil is alluvial, upon which corn would grow in perfection, if the land were not flooded during the growing season. Farther back, it is composed, to a very great extent, of vegetable matter in a high state of decomposition. It is black, unctuous and rich, having "the feel" of soap when rubbed between the thumb and finger, and has no appearance of being impregnated with any salts or acids that would make it unsafe to be applied immediately to the soil. Prof. DANA states that where two loads of such muck are mingled with one load of pure droppings from the cow, each of the three loads is worth as much as though all were pure droppings. Look, then, at the immense loss which our people annually sustain in being deprived of the use of such a fertilizer; for the want of which they are expending large sums of money for guano and other specific manures!

This is the first time since the memorable droughts of 1854, '55 and '56, that we have been able to remove it from its bed—and now only with difficulty, and at double the cost it would require if the water were not thrown back by dams.

On each side of these meadows, for a distance of more than twenty miles, there are large tracts of sandy lands that have been cultivated in rye for two or three generations, that might be restored to the most abundant fertility, if the people could have access to these now drowned meadows. It seems the order of nature herself, that where tracts of weak and unproductive soils are found, there are usually deposits of material in the neighborhood, either of a vegetable or mineral character, that will give such lands fertility and value. It is only for man to avail himself of them, and make the waste places smile with a cheerful and profitable vegetation, that will gladden his heart, and give strength to the State.

In this case, however, this beneficent order of things is destroyed by the rapacity of man, who seeks gain though it trample upon the plainest principles of justice, and wrings the honest reward of labor from him who has endured the pa-

tient toil. These sandy lands must remain ghastly and profitless aspects in the landscape, because those who own them are deprived of the power of dressing and keeping them by a combination of soulless and wicked corporations.

As we labored in removing these rich deposits from their native beds, we could see all around us hundreds of acres of standing grass into which a scythe had not entered, nor will enter, this season. The water has been so high all through the haying period, as utterly to forbid the harvesting of this grass, and on the last days of September men and teams were engaged in getting away a portion of it, for litter, perhaps to the amount of one ton in fifty. A gentleman who lives on the margin of one of these meadows, states it as his opinion, that he can look out from his windows upon *two thousand tons* of standing grass! That is, grass that would make that amount if dried as hay. Here is *ten thousand dollars'* worth upon a single meadow, a loss to its owners through the injustice and rapacity of others, who have not, in our judgment, the slightest claim upon the land or the slightest right to flow it.

This state of things cannot always last among a people as just and intelligent as are those of Massachusetts. Sooner or later, the stupendous fraud practiced upon the last legislature will be made clear, and the punishment which such conduct deserves visited upon the heads of its perpetrators, and those rights will be restored which have so long been wrested from the land-owners in the beautiful Concord River Valley.

For the New England Farmer.

SUMMER-MADE MANURES.

MR. EDITOR:—Within the last few years many of our best farmers have changed their mode of saving their summer's manure, and now, instead of yarding the cattle at night, they stable them, using a sufficient quantity of some absorbent to save the liquid portion, the whole being thrown into the cellar or a tight shed; but experience has sometimes shown that such manure is unfit for some purposes.

I have seen such manure carted out in the fall into the fields, and the next spring shovelled over, and at planting time put in the hills for corn, and the result has been a very light crop, not as good, I think, as it would have been without anything in the hills; so often has this been the case, that some have felt inclined to return to the old method of making in the open yard.

Now it seems strange to me that the corn should refuse to grow upon such manure. I suppose many will say that "the reason is very plain—the manure was too strong." I do not think that this is all the trouble with it. I know of a small piece of corn, which was planted upon manure made last season by stabling and using loam to save the liquid portion. Late in fall it was removed to the field and when put in the hills at planting time a spoonful of superphosphate was thrown over most

of it, but was omitted on a part. Where the phosphate was put there is a fair crop, but next to nothing where omitted.

Had it been owing to the strength of the manure, I think that the addition of the superphosphate would have only made the matter worse. If you or some correspondent would enlighten me a little upon this matter, I should esteem it a favor, as my object in writing is merely to draw out the opinion of others who have had more experience in the matter. In the instance which I have just mentioned, the effect of phosphate was more evident than in most other places where I have seen it used this season, as in quite a number of cases its effect was scarcely perceptible.

Worcester County, Sept., 1862. TYRO.

REMARKS.—We can conceive of no objection to such summer-made manure as our correspondent describes. Such manure, if properly preserved until hauled out, must be very strong, and of course ought to be judiciously used. At any rate, he describes our own practice in collecting and preserving summer manure, and we certainly receive the most decided benefits wherever it is used.

THE GRAY SQUIRREL.

The gray squirrel is one of the most beautiful and graceful of the inhabitants of our forests, in which it generally makes its home, hardly ever venturing from them, unless occasionally, when the Indian corn is ripe, it enters the fields to add a little to its winter store of nuts; the amount which it pilfers could hardly be missed, however, unless the field should happen to be in or near the woods.

It prefers forests of chestnuts or oaks, in which its winter store can be readily collected. The first heavy frost is the signal for this work to commence, and the dropping of the chestnuts and acorns which the frost has loosened, accompanied by the rustling of the squirrel through the newly-fallen leaves as it gathers the nuts together, and carefully deposits them in hollow trees and crevices of rocks, or buries them in some secure place beneath the leaves, are the sounds most intimately connected with our woods in the autumn season.

The summer nest is built in some tall tree, at the junction of several limbs with the trunk. It is composed of sticks and leaves, and is lined with soft grass and ferns; in this the young are reared, and live with the female till they are old enough to shift for themselves. At the approach of winter, some hollow in a tree is selected, sometimes the abandoned nest of a woodpecker, in which a warm nest is built, composed of grass and soft leaves; this is the winter home of usually the whole family. In early spring the young are driven off by the old ones, who soon build the summer nest, in which to rear another family. The young, after being driven off, soon pair, and in their turn become heads of families.

The habits of this animal are very interesting. You may be walking through the woods, and shortly you hear what you at first think to be the barking of a small dog; on listening, you discover your mistake; the abrupt notes *qua qua*, with

chattering guttural additions, proceed from the tall tree a few rods from you; you cautiously steal on tiptoe to the foot of the tree, but do not see the animal, even after looking carefully on every side. You know the little fellow is there, for he could not possibly have got out of the tree unless you had seen him. Now, if you go close to the tree, and step quickly to the other side, you will see him whisk suddenly to the opposite side from you, where he is now closely hugging the tree, and perfectly motionless; your interest has now become awakened, you are curious to see more of him; very well, you must retire a few rods, and remain perfectly still. You had better take a comfortable seat, for he will not move while you are near the tree. Presently you see his head, with its bright, lively eyes, slowly moving around to the side where you are; this is the first reconnoitering movement. If you remain perfectly still, he will soon take his position on a limb, where jerking his tail and flaunting it in conscious security, he gives vent to his satisfaction at your removal in a series of chattering barks, which are answered, perhaps, by other squirrels that you had no thought were in the neighborhood; soon one of them, with a challenging bark or chatter, chases another, and shortly three or four of them are scampering about, running through the fallen leaves, and up and down the trees in high sport; presently one of them, in escaping from the others, comes suddenly near you; with a shrill whistle of astonishment he scampers up the nearest tree, and is soon as effectually concealed as all the others were the instant he gave the alarm. You may as well retire now, for you will see nothing more of them; as long as you remain near, they will not budge a foot.

AUTUMNAL SCENES.

What a rich and attractive book might be written by a person who has the genius,—it must be almost a passion,—upon *Autumnal Sights and Sounds*. How unlike the flush of Midsummer, the new life and glow of May, or the grand march of the Winter Months, would it be, in the scenes it presents. And then in sounds, as well as sights, how differently they strike the ear,—ah, the heart, too. Now, they are full, but subdued; uttered in solemn cadences in the twilight, the shades of evening, or hedge or forest aisles,—all unlike the joyous notes of Spring, breaking from every throat in the glorious sunlight, and from every bounding creature that can lift its voice to Heaven! What surpassing Wisdom and Love is manifested in the changing Seasons! What a different class of sensations, of hopes and delights, they bring to all observing and reflecting minds—and how gently, and confidently they lead us up to Him who created and arranged them.

With what unusual quiet and beauty these sights and sounds have come upon us this season. No untimely frost has fallen upon foliage or flower to lay them low in their prime, and they have been left to assume their varied hues by the gradual process of ripening. In low places, where the

roots of trees do not take deep root, they began to put on their autumnal drapery early in September, and gave the hedge and copse a beautiful appearance at that early day. This process has been going on until the highways and byways, and the grand old forests, are beaming in a splendor of unrivalled hues. No wonder that the poet declares that the "year grows splendid." What a gratification it must be to the writer, to be able to express the thoughts given in this beautiful little poem, on

OCTOBER.

BY LYDIA A. CALDWELL.

The year grows splendid! on the mountain steep
Now lingers long the warm and gorgeous light,
Dying by slow degrees into the deep
Delicious night.

The final triumph of the perfect year,
Rises the woods' magnificent array;
Beyond, the purple mountain heights appear,
And slope away.

The elm, with musical, slow motion, laves
His long, lithe branches in the tender air;
While from his top the gay Sordello waves
Her scarlet hair.

Where Spring first hid her violets 'neath the fern,
Where Summer's fingers oped, fold after fold,
The odorous, wild, red rose's heart, now burn
The leaves of gold.

The loftiest hill—the lowliest flowering herb—
The fairest fruit of season and of clime—
All wear alike the mood of the superb
Autumnal time.

Now nature pours her last and noblest wine!
Like some Bacchante beside the singing streams,
Reclines the enchanted Day, rapt in divine
Impassioned dreams.

But where the painted leaves are falling fast,
Among the vales, beyond the farthest hill,
There sits a shadow—dim, and sad, and vast—
And lingers still.

And still we hear a voice among the hills—
A voice that mourns among the haunted woods,
And with the mystery of its sorrow fills
The solitudes.

For while gay Autumn gilds the fruit and leaf,
And doth her fairest festal garments wear,
Lo! Time, all noiseless, in his mighty sheaf
Binds up the year.

The mighty sheaf which never is unbound!
The Reaper whom our souls beseech in vain!
The loved, lost years that never may be found,
Or loved again!

SINGING.—The effect of music is powerful. In a school it has a tendency to promote cheerfulness and help discipline. It also furnishes a pleasant relaxation from study. Wherever it has been faithfully and systematically tried, with well qualified instructors, it meets with general commendation. To unite in singing at the opening of a school, seems to compose the mind and fit it for study; and to sing at the close of the school, when the perplexities and duties of the day are over, tends to allay all irritable feeling—to unite hearts—to bring rays of sunshine to clouded countenances, and make the associations of the school-room pleasant and inviting.—*Maine Teacher.*

For the New England Farmer.

AGRICULTURE IN COMMON SCHOOLS.

MR. EDITOR:—As this subject has been left open for discussion by one of your correspondents, I venture, without flattering myself that my opinion will have much influence over the "solid men" of the farm, to express my views of the project.

The author of the "Retrospective Notes" says, that "every study may, with perfect propriety, be introduced into a common school, which has any tendency or power, by its increasing knowledge or invigorating mind, to fit and prepare the young for the worthy discharge of the duties, offices, responsibilities and transactions or business of adult life." If this is the truth, and there is no reason for doubting it, then, not only agriculture, but law, medicine, theology, or any of the arts, sciences, trades and professions, might, with equal propriety, be introduced as studies into our common schools. But, says one, who would think of sending a child to a district school to learn law or medicine, or to acquire a practical knowledge of any trade or profession? No one would do so, and for this reason; we have no teachers who are qualified, or required to teach such things. Now the facts are the same with regard to the study of agriculture. There are but very few teachers who possess even a theoretical knowledge of the agricultural art. The pupil might as easily acquire a book-knowledge of farming at home, as at school, if the teacher is not qualified to instruct him. When a boy I commenced the study of astronomy in the district school, but the teacher was not acquainted with the science, and as there was no apparatus to illustrate its truths, my progress was slow—indeed, I might as well have learned and recited my lessons at home.

With proper text books, and a practical, skilful agriculturist for a teacher, a boy who intends to become a farmer, might gain knowledge which would be exceedingly useful to him in after life. But after all, the best place, in my estimation, to learn the farmer's art or profession is the farm, under an experienced guide and wise instructor. It is only there that a young person or prospective farmer can overcome, in some measure, at least, his natural repugnance to hard work, and acquire industrious habits, without which his knowledge will be of but little use to him.

The scholar may have the right to study agriculture, or anything else he pleases in school, but unless the teacher can assist him in his studies no benefit will be received by going to school. Yet I do not wish to discourage any plan which has for its object the increase of useful knowledge among the farmers, and being fond of new things and new ideas, would like to have the study of agriculture introduced into our schools for a year or two, by way of experiment, for such a course would certainly do no harm, and it might do some good.

S. L. WHITE.

TO CURE KICKING HORSES.—In No. 13 I noticed an inquiry about a kicking horse. If the horse stands between two partitions, bore a two-inch hole in each, on a horizontal line, about one and a half inches above the horse's hip; put a round stick in the holes, and put a pin in each end of the stick, so that it will not fall; tie the horse

pretty short, so that he will not back too far. He will try to kick, but will not be able. After a few ineffectual efforts he will give it up. After one or two years of such treatment, the horse will be cured. The horse cannot hurt himself, for the stick is too near his hips. I have two mares that used to kick. I tried this plan, and cured them.

—J. R. in *Rural New-Yorker*.

MATERIALS OF WHICH SOIL IS COMPOSED.

CLASSIFICATION OF SOIL.

Soils are named from the amount, or proportions, of the various substances which enter into their formation.

If a soil consists of sand, it is called a SANDY SOIL.

If the largest portion is clay, it is called a CLAYEY SOIL.

When lime predominates, it is called a CALCAREOUS SOIL.

Those substances may exist together, but in different proportions, in the same soil, in which case it usually receives a distinct name.

A mixture of sand and clay, with a small portion of lime, is called a LOAM.

If it contain much lime, it is called a CALCAREOUS LOAM.

If it is composed of clay, with much lime, it is called a CALCAREOUS CLAY.

A certain proportion of these substances has given specific names to soils.

Pure clay, which is commonly called PIPE CLAY, is composed of about sixty parts of silica, and forty parts of alumina, with a small quantity of oxide of iron. This kind of clay contains no silicious sand which can be separated by washing with water. It forms but a small quantity of soil, and is found in comparatively few localities.

TILE CLAY forms the strongest of clay soils. It consists of pure clay, mixed with from five to fifteen per cent. of silicious sand, which can be separated from it by boiling or washing.

CLAY LOAM contains from fifteen to thirty per cent. of fine sand, which can be separated by boiling. The different parts of this soil may be very easily separated, and it is consequently more easily worked. Such soil is very properly sought for in the selection of a farm.

A LOAMY SOIL contains from thirty to sixty per cent. of sand, which is retained so loosely that it can be readily separated from it by washing.

A SANDY LOAM leaves from sixty to ninety per cent. of sand.

A SANDY SOIL consists mostly of sand, and contains no more than ten per cent. of clay.

In a MARLY SOIL the proportion of lime must be more than five per cent., but less than twenty per cent.

MARLS are called SANDY, LOAMY, and CLAYEY, in accordance with the proportions they may contain of these substances, provided they be free from lime, or do not contain more than five per cent. of this material.

Soils are denominated CALCAREOUS when the proportion of lime exceeds twenty per cent., and thus by its quantity becomes an important constituent.

There are also CALCAREOUS CLAYS, CALCAREOUS LOAMS, and CALCAREOUS SANDS, which take their

names from the proportion of clay and sand which they may contain.

VEGETABLE MOLD is sometimes a prominent characteristic of a soil.

In PEATY SOILS, its proportion may be equal to sixty and sometimes as much as seventy-five per cent. of organic matter.

EXTRACTS AND REPLIES.

MUCK—APPLE TREES.

I have been digging muck, nearly half clay. I wish to apply this to a gravelly loam, where I wish to sow wheat in the spring. Will it do to apply muck of that kind dug now, next spring, without mixing with lime, or in other words, how shall I apply it to make it pay?

Also, I should like to learn if anybody knows how to make fruit trees bear the *odd* year, especially apple trees. Last year I had next to none, this year an abundance, and next year I shall have none again. Will you, or some of your experienced correspondents, give me light on these subjects?

YOUNG FARMER.

Deerfield Centre, Sept., 1862.

REMARKS.—If the muck is black and fine, and has little or no acidity, cart it to your intended wheat land this fall and drop it in cart load heaps, or spread it, if you have opportunity. It would be well to sow lime on this if you can; if not, the muck alone will be an excellent dressing.

It is said that taking the blossoms from a tree will cause it to bear the succeeding year. It probably will. Did you ever take the blossoms from a medium-sized tree that had a full blow? How long do you suppose it would occupy one man to do the job? When you have completed one tree, we think you will never begin another. No other mode of changing the bearing year occurs to us. We are all in the same condition that you are.

POULTRY AND POULTRY-HOUSE.

1. It is said that salt hay will keep fleas out of a dog-house; now wouldn't it keep lice out of hens' nests?

No. Nor fleas out of a dog-house, in our opinion. A great deal of labor is thrown away in attempts to prevent the access of insects, or to destroy them when they are in possession, by expedients similar to that suggested in the above inquiry. Insects are created to live and propagate their kind exposed to the elements, and are capable of sustaining themselves against measures vastly more severe than scattering a little salt hay about them. Perfect cleanliness in the hen-house, with proper feeding, will usually be followed by *perfect health* in the fowls who occupy it; *usually*, but not always. With the best care, it is surprising how a stock of poultry will sometimes become infested with vermin all at once, and seem to defy all the skill of the keeper to dislodge them. Indeed, they are occasionally triumphant,

and destroy the whole family. We have known this result with some of the most skilful persons—but not often. If you find a fowl in your collection that is sick in the least, or that has lice upon it, take it away at once and give it all necessary attention by itself, so that it shall not communicate the vermin or the disease to others. This will be found much more easy than to cure.

2. The *Country Gentleman* says, "spread lime dust on the hen-house floor." Does not this injure the manure, and would not ashes do as well?

The effect of ashes spread upon the floor would be similar to that of lime, only less in degree. Neither, however, would be objectionable, used judiciously for the purpose suggested by the *Country Gentleman*.

3. Why have any floor? It seems to me that a dry, smooth bed of sand or clay has several advantages over board flooring.

There is no need of a floor if the apartment is dry. Your own views of the matter we think are correct. We use no floor but such as you describe.

4. Would "tan bark" packed about the sides of the house harbor lice?

It would be quite likely to, and yet we should not hesitate to use it for the purpose of keeping the building warm.

5. I hear old farmers speak of getting their pullets "too fat to lay." Is there any truth in that?

We think there is. Laying hens that are fed principally upon corn and corn meal made into dough, become extremely obese, and we have thought ceased to lay as liberally as when not burthened with such a mass of fat. Perhaps a good way to feed them would be to feed once each day with a small portion of corn, and leave barley and oats constantly before them, giving the boiled potatoes, scraps, sour milk, &c., occasionally, as they can be spared.

6. What is the proper way to scald poultry?

Have a vessel of scalding water at hand, and immerse the fowl, lifting it up and down gently two or three times. But the water must not be *too hot*, nor the fowl kept in too long. A little experience, coupled with careful observation, will soon teach you what the right temperature and the right time is. Poultry, however, that commands the highest price in market, is rarely scalded. But it requires "knack" and patience to pick a fowl well without scalding.

7. Is there any cheap machine suitable for cutting livers, lights, &c., for hen feed?

Yes. A small meat-cutter, such as is used in preparing sausage meat, may be purchased for about two dollars and fifty cents, and would an-

swer the purpose very well. They may be found at the agricultural warehouses.

8. Do you still think "Dorkings" the most profitable breed for marketing? Gray or white?

Sept. 30, 1862. A NEW SUBSCRIBER.

Our opinion on this point should not be urged, because we have not bred other varieties sufficiently to know their merits.

CRANBERRY CULTURE.

I would like to make a few inquiries in regard to the cranberry culture.

1. What time of the year should the plants be set out?

2. Which kind is the best?

3. Where could they be obtained, and at what price?

4. How long after they are set out before the plants will bear?

5. How near should the plants be set out?

New Hampshire, Oct. 6, 1862. "FARMER."

REMARKS.—1. Set the plants in April.

2. There is but little difference in the varieties, —the *Bell*, *Bugle* and *Cherry*.

3. They can be obtained from hundreds of meadows, scattered all over the eastern portions of this State and New Hampshire.

4. The plants will bear quite moderately the second year after they are set; the third year we have taken a bushel of fine berries from a square rod of land.

5. Set the plants as near as you can afford to, —so that they will touch each other, if you please. If set one foot apart each way, they will cover the ground in three years, if they succeed well.

POTATO DIGGING.

I like the column of "Extracts and Replies," in the *Farmer*, for its valuable hints to learners in the art agricultural. I have, in prospect, a long siege at potato digging. They grow in straight drills, in sandy loam.

Query.—Cannot potatoes, growing in straight rows, be dug to better advantage by first using a plow? Would not even a common plow, facilitate the process, if carefully used along one or both sides of the rows?

Granting there would be some waste of potatoes, need it equal the extra time and labor required in using the hoe or digger alone?

Framingham, Oct. 4, 1862. SUBSCRIBER.

REMARKS.—A plow is sometimes used with advantage. The most effective implement we have ever seen used is a long handled spade, especially if in the hands of an Irishman who has practiced with it in that direction. A prong hoe injures too many of the potatoes, and is very slow, compared with the spade. Try the spade.

STATE BOUNTY TO AGRICULTURAL SOCIETIES.

I am glad that the topic which I suggested in a late paper has drawn out some sensible remarks

as to the continuance of our annual shows. It has really seemed to me, for a considerable time, that improvement might be made in the mode of appropriating the moneys received by our agricultural societies from the State, if these bounties are to be longer continued; of which I have more than once heard doubts expressed, as the State has so much need of money for other purposes; and as matters now go on, is likely to have increasing need. I know not how it may be in other counties, but in my own, I am fully satisfied, we could get along well enough, without the bounty from the State. I make the suggestion in the hope of drawing out instructions from wiser heads of better experience.

October, 1862.

ESSEX.

PLUM GROWING.

I have several times noticed in your paper allusions to Mr. H. VANDINE's great success in plum growing, and desire a little information upon the matter. Cannot you persuade him to tell us, readers of the *Farmer*, how he manages to grow them "in spite of curculio and black knots;" also, which kinds are most free from curculio?

Worcester Co., Sept., 1862.

TYRO.

REMARKS.—We trust friend VANDINE will oblige "Tyro," and a great many others, by giving them some of his experiences and opinions on the raising of plums.

BREAD-MAKING MACHINE.

I saw an account of a bread-making machine for family use, described in a communication in your paper. I would like to know the address of the proprietor.

S. P. M.

Cape Elizabeth, Sept. 26, 1862.

For the New England Farmer.

OBSERVATION AND EXPERIENCE.

When I was a boy of fifteen years of age, my father gave me the use of a small piece of land to plant. The soil was a deep loam, and rather moist. A crop of potatoes was harvested from it the year before, plowed and manured in the fall; the manure was dropped in heaps, to be applied the next spring. He plowed the ground, and as it was the custom among farmers in those days to plant on the furrow, he thought nothing about harrowing it for me. I had observed that it was difficult to plant on the furrow and make straight rows, and I thought it would cause more labor to dress it. I had taken notice that when the season was a dry one, the soil dried more. I harrowed it smooth and planted it with corn, three and one-half feet between the rows, and three feet between hills. It came up well and quick; the soil being moist, I thought I would not cover it deep, but took pains to press the soil with my hoe, and was careful to keep it free from weeds. I had observed that where the weeds were left to grow until they had attained a large growth it required more labor to dress the soil, and that the earth was dryer and more barren. The year before, my father planted a piece of land with potatoes; it was wet, and could not be planted very early; before they were large enough to hoe it

was necessary to commence haying; however, a certain portion of them were hoed, and the remainder left until a dull day in haying; it was my lot to assist while hoeing, and I observed a difference in their growth. That part of the piece which had been hoed grew rank, and looked very healthy, while the remainder looked slender. I helped harvest them, and that part first hoed yielded well—the others were smaller. The crows pulled up a little of my corn, which I transplanted as faithfully as I could, being very careful to take up some earth attached to the roots, and not disturb them. This I did by the use of a brick-mason's trowel. Some of the ends of the leaves turned yellow and looked sickly, but immediately I was favored with a rain, and I soon perceived that it began to assume a more healthy appearance. When I hoed it the second time it looked as green and promising as the other, only the stalks were lower. At harvest it would have required a close observer to perceive any difference, and the soil gave me a good yield.

The next year I planted a piece with potatoes, and fitted the piece well, according to my understanding; harrowed it smooth and furrowed it out with a small plow. The farmers in that vicinity were in the habit of planting three and one-half feet between hills and rows. I often observed that there was a waste of land, and resolved to try an experiment. I made my furrows three feet apart, put manure in the hill, and potatoes about one foot apart, and a less quantity in the hill. It was a forward spring, and as I manured well, they came up and grew vigorously. I hoed them when about three inches high. I had often noticed that when left to grow to a foot in height before hoeing the weeds grew as well as the potatoes. I hoed the second time early, leaving no weeds to grow. About the first of July they almost covered the ground with healthy tops. I raised about one-eighth more, I thought, than my father, though his soil was as good and as well manured. They were almost all fit for table use.

W. E.

THE STORY OF AN ATOM.

The atom of charcoal which floated in the corrupt atmosphere of the old volcanic ages, was absorbed into the leaf of a fern when the valleys become green and luxuriant; and there, in its proper place, it received the sunlight and the dew, aiding to fling back to heaven a reflection of heaven's gold; and at the same time to build the tough fibre of the plant. The stem was consigned to the tomb when the waters submerged the jungled valley. It had lain there thousands of years, and a month since was brought into the light again, imbedded in a block of coal. It shall be consumed to warm our dwellings, cook our food, and make more ruddy and cheerful the hearth whereon our children play; it shall combine with a portion of the invisible atmosphere, ascend upward as a curling wreath to revel in a mazy dance high up in the blue ether; shall reach the earth again, and be entrapped into the embrace of a flower; shall live velvet beauty on the cheek of the apricot; shall pass into the human body, giving enjoyment to the palate, and health to the blood; shall circulate in the delicate tissues of the brain; and aid, by entering into some new combination, in educating the thoughts which are now being uttered by

the pen. It is but an atom of charcoal: it may dwell one moment in a stagnant ditch, and the next be flushing on the lip of beauty; it may now be a component of a limestone rock, and the next an ingredient in a field of potatoes; it may slumber for a thousand years without undergoing a single change, and the next hour pass through a thousand; and, after all, it is only an atom of charcoal, and occupies only its own place wherever it may be.—*Hibberd's "Brambles and Bay Leaves."*

CURE FOR PLEURO-PNEUMONIA IN CATTLE.

A Mr. Clote writes to an Australian paper as follows: "The cure is simply inoculating every head of cattle on the farm with the diseased lung of the first animal that has either died of it or (having evidently the disease) has been killed for it. Various modes of inoculating have been adopted. The first time it showed itself in my herd I lost 160 cows and heifers, when I had all the cattle driven into the yard, and with a sharp-pointed penknife punctured the skin at the very point of the tail till I saw blood, the point of the penknife being well moistened with the matter of the diseased lung. The disease instantaneously stopped; and although I lost one or two after that, it was entirely owing to the enormous size they swelled, particularly at the root of the tail and all about the rump, completely preventing the animal from dunging. Whenever this happens now, we make an incision, and, by fomenting, prevent all fatal consequences. Some of the inoculated cattle lose their tails, and some only the points, whilst the great majority don't appear to suffer at all. Two years ago, the disease broke out again in my herd, and several had it before I was aware of it; but the moment I inoculated it stopped. A few months since, it appeared again amongst some oxen I purchased, but by inoculating all on the farm *there was an immediate end of it*. These diseased oxen had been running with my herd of cattle for a considerable time, and *not a single animal that was inoculated two years ago caught it*; only two or three I had since then purchased got affected. In short, the efficacy of inoculating is as much believed amongst the stockholders in the colony as vaccination for the small-pox. It is no uncommon thing at a sale for an auctioneer to warrant the oxen to have been inoculated to enhance their value."

A NEW WHIPPLETREE.—Many accidents occur from horses getting frightened and running away, caused by the whippetree being detached and dropping upon the horse's heels. An invention to obviate this difficulty has been made, and a model of the whippetree forwarded us by the inventor, Jacob Muzzy, of East Eddington, Me. The whippetree is hollow, and is strengthened by an iron fastened upon the under side, of the same dimensions as the whippetree. Through the wood part a leather strap passes, playing at each end over a roller. To the ends of this strap the fastenings for the traces are firmly placed. The whippetree is designed to remain stationary, the motion of the horse or carriage acting with ease by means of the rollers at each end, and all noise or clatter is done away with.—*Maine Farmer.*

MANAGEMENT OF PASTURES.



We are not aware that any experiments have recently been made in this region to test the practicability of the system we are about to recommend, but we, nevertheless, feel fully persuaded in our own mind, that it cannot, if systematically and rigidly carried out, be followed by other than the best results. Every farmer is aware that a successful process in the labor of enriching soils is that of "turning them out to pasture," and that soils which have been thus treated, and allowed to recuperate during a series of years, are found, on being again plowed and subjected to cultivation to be endued with principles of fertility sometimes equal to those which they possessed in their primitive or virgin state. This, we conjecture, would be the common result of the system when thoroughly carried out; and we know of no instance in which lands that have been depastured for a series of years—no matter how carelessly they may have been cropped—have been injured by it. On the contrary, many exhausted fields from which all the industry and skill of the cultivator were inadequate to secure a remunerating crop, have been restored to productiveness in a few seasons, simply by "turning them out."

This was once a very common opinion in some of our oldest agricultural districts. No sooner did a field that had been robbed of its fertility by a long course of severe and injudicious cropping fail to produce liberally, than it was "turned out to pasture." What the precise operation of natural laws upon the land is, left in this condition, we are not able to say with certainty, but have no doubt that it may be fairly imputed to three causes: the annual decay of the vegetable matter which grows upon the surface, which serves as a top-dressing, though it may be very slight—the effect of the solar rays in attracting mineral matters from below, upward, nearer the surface, where the roots of plants may readily find them, and the fertilizing influences of the atmosphere, that great ocean of light, moisture and quickening gases ever spread over the soil and descending upon it, to feed and perfect the vegetation that covers the surface of the earth. We are inclined to think that the principal advantage received by land in a state of exhaustion, is from the latter source.

When land is thus partially or wholly restored to a state of fertility, we too often find little in subsequent details to recommend. After having repossessed himself of a portion of valuable soil, almost the first step of the proprietor is to *re-adopt* the precise system of management, in cropping, by which it was originally made poor! Instead of carefully husbanding his re-attained wealth, he goes immediately and blindly to work to dissipate and destroy it.

The plan we have to suggest is this; Let the poor fields be at once "turned out;" let them lie two, four, or six years, as the case may seem to demand, and until the soil has re-acquired its former vigorous and healthy tone, and then, without the intervention of any grain crop, or if the object is grass exclusively, without any crop whatever, let them be laid down to grass. The period for plowing should be that in which vegetation is in its greatest vigor, although we should, if the land is naturally thin and weak, prefer sowing the seed the subsequent spring.

If *thorough* improvement is contemplated, the grass may be turned in, in June, and a crop of peas, millet, or buckwheat sown to be turned down as a green dressing, and a few bushels of ashes and gypsum sown, either before or after plowing.

In no case should a ripe crop be taken, nor should the young grass be fed by cattle until it has thoroughly radicated or taken strong root.

In plowing, care should be taken to let the plow run a little deeper, if possible, than in previous plowings, in order to turn up some of the subsoil, and completely to inhumate whatever of soluble matter of a vegetable nature there may be on the surface, as well as to furnish a deep and genial medium for the expansion and sustenance of the young roots.

Lands managed in this way, we have no doubt would produce bountifully for four or five years, when they should again be plowed and laid down as before. Four years is sufficiently long to crop any land laid down to grass, unless it be copiously manured, or it is moist, swale land, that receives the annual wash of surrounding higher lands. Long cropping and short feeding in the fall and spring, and no dressing, will infallibly ensure short crops, an inadequate return for the cost and trouble of cultivation, and poverty in the end! On this topic a writer very truly remarks:

"However inveterate may be our prejudices against book farming, as it is ignominiously denominated, one great and startling truth is clearly obvious,—we must either remove our former mill-horse course of trudging blindfold through the routine of those ancient customs and traditionary usages which have been so long and fatally perpetuated from father to son, or renounce our farms. There is no alternative. We have out-

raged every principle of Nature in our system of cultivation, thus far, and must now adopt a new one; not, however, immediately and at once, but by degrees, just as the architect proceeds in the reparation of a time-worn edifice, rejecting what is worthless and rotten in its composition, but carefully retaining and improving, if possible, that which is sound and good. Because our fathers or our grandfathers persisted in hauling a tree from the forest by the top, is no argument in favor of our doing so."

These suggestions are applicable only to land that is capable of being plowed. On those that are not, a different system must be pursued,—and what the system should be, we hope some of our correspondents will inform us.

For the New England Farmer.

THEORY AND PRACTICE.

MR. EDITOR:—The object of every farmer, I suppose, is to raise from a given extent of land the largest amount of crops at the least expense of time and labor. To accomplish this object, if he be a wise man, he brings into operation all his knowledge, whether it be theoretical or practical. In his case there is a perfect harmony between his theory and practice. The one follows, as a natural and necessary consequence, from the other. If his theory be right, his practice will be right. If his theory be wrong, his practice will be wrong. His theory and practice will both be right, or both be wrong, according to circumstances. Many things which appear to be right, and which are received as true in theory, prove to be untrue when tested by experience, and they are rejected in practice. No one will practice false theories when he knows them to be wrong. It is some what difficult to explain some true theories in practical husbandry. The theories themselves will sometimes explain useful practices, and point out the circumstances under which they may be adopted. Theories are generally the foundation of all correct practice, and form the basis of all correct reasoning. Correct theories generally lead to important practical results. But erroneous theories frequently lead to grave errors in practice. It is very important, then, and certainly we cannot take too much pains to be right in theory, which, if we be consistent with ourselves, will ensure our being right in practice.

Some seem to think that all theories are necessarily wrong, merely because they are theories, and that all practice is necessarily right. This is a great and fatal mistake. It is difficult, I know, to find two farmers who agree in everything, either in theory or practice. *Plow deep*, says one, if you wish to obtain a good crop. No, says another, I shall do no such thing. I have tried that long enough, and I know from long experience that it will ruin my land, and that I shall only get a crop of stones for my pains. *Compost your manure*, says one. I shall do no such thing, says another, for it will not add to my manure, and by so doing I shall lose my time and labor. *Build you a good barn cellar* to keep your manure, says one. Nonsense, says another, I shall continue to throw all my manure into the yard, as I always have done. *Cut your hay and fodder*

for your cattle, says one. No, says another, it does not increase the amount of nutriment by cutting it, and I shall only have my labor for my pains. And so on, to the end of the chapter.

Now, here are theory and practice, truth and error, all jumbled together in the most admired disorder! What is needed to solve the difficulty is a little accurate thought and correct reasoning. For instance, the theory of deep plowing may be, and probably is, correct. But it will not do to plow all lands, of every description, deep, without regard to their condition and circumstances. It will not do to turn up a great amount of the subsoil without a liberal supply of manure of some kind. It will not do to subsoil twenty or thirty acres with only manure enough for four or five. It will not do to plow very deeply a great amount of poor land, either wet or dry, and then expect a great crop because you have plowed it so deep. No; in order to secure this end, all the conditions and circumstances essential to a good crop must be complied with. The same is true with regard to the use of compost manure, barn cellars, and the cutting of hay and fodder for cattle. There are certain conditions and circumstances, in each instance, which must be complied with, in order to be successful. The same is true with regard to theories generally.

Besides, there are some theories which, though true, are yet of no practical importance, and which, on that account, we should never think of reducing to practice. All useful theories, when rightly understood, conduce to correct practice. In fact, all practice, whether right or wrong, grows out of some theory, as its germ, or root. It is theory which produces practice—which gives it direction, and renders it successful. We should endeavor to understand this subject, and in the treatment of the various kinds of soil—the proper mode of preparing and applying manure—the adaptation of particular crops to particular localities, and the proper succession of crops, we need all the light of science and of theory to direct and assist us. Our want of success in these particulars is owing to our want of correct theory and practice, which alone can accomplish these objects.

Warwick, Mass., 1862. JOHN GOLDSBURY.

A NOVEL WAY OF CURING A BREACHY HORSE.—A correspondent of the *Iowa Homestead* was riding the other day with a friend, and observed that one of the horses had a hole in each ear. On inquiring the cause, he learned that it was to keep the horse from jumping. "Why," said he, "a horse don't jump with his ears." "You are mistaken," replied his friend; "a horse jumps as much with his ears as with his feet, and unless he can have free use of his ears he cannot jump." He ties the two ears together, and has no more trouble with the horse. We give this for what it is worth.

"THOUGHTS ON ECONOMY."—The attention of the reader is called to a capital article in another column, on the subject stated above. We hope it may lead many excellent men and women to a candid reflection of some of the matters so fairly presented.

For the New England Farmer.

THE BIRDS OF NEW ENGLAND---No. 22.

Yellow-breasted Chat—Cedar Bird—Bohemian Wax-Wing.

The YELLOW-BREADED CHAT (*Icteria viridis*, Bonap.,) is exceedingly rare in New England, but, being a more Southern species, is common enough in New Jersey and Pennsylvania, and the States southward to Guatemala, and westward to the Missouri. It is occasionally seen at Springfield, and in different parts of Connecticut, and I have recently been informed of a nest of these birds, discovered in Lynn, the present year. It is a bird of very singular habits, and peculiar characteristics, and has long been a puzzle to naturalists, in reference to its place in zoological systems; having been placed in half-a-dozen different genera, and in several families, but is generally regarded as ranking near the Vireos. From Wilson's admirable account of this bird I borrow the following:

"In its voice and manners, and the habit it has of keeping concealed while shifting and vociferating around you, it differs from most other birds with which I am acquainted, and has considerable claims to originality of character." "When the male has taken up his residence in a favorite situation, which is almost always close thickets of hazel, brambles, vines and thick underwood, he becomes very jealous of his possession, and seems offended at the least intrusion; scolding every passenger as soon as they come within view, in a great variety of odd and uncouth monosyllables, which it is difficult to describe, but which may be readily imitated, so as to deceive the bird himself, and draw him after you for half a quarter of a mile at a time, as I have sometimes amused myself in doing, and frequently without once seeing him. On these occasions his responses are constant and rapid, strongly expressive of anger and anxiety; and while the bird itself remains unseen, the voice shifts from place to place, among the bushes, as if it proceeded from a spirit. First is heard a repetition of short notes, resembling the whistling of the wings of a Duck or Teal, beginning loud and rapid, and falling lower and slower, till they end in detached notes; then a succession of others, something like the barking of young puppies, is followed by a variety of hollow, guttural sounds, each eight or ten times repeated, more like those proceeding from the throat of a quadruped than of a bird; which are succeeded by others not unlike the mewling of a cat, but considerably hoarser. All these are uttered with great vehemence, in such different keys, and with such peculiar modulations of voice, as sometimes to seem at a considerable distance, and instantly as if just beside you; now on this hand, now on that; so that from these manoeuvres of ventriloquism you are utterly at a loss to ascertain from what particular spot or quarter they proceed. If the weather be mild and serene, with clear moonlight, he continues gabbling in the same strange dialect, with very little intermission, during the whole night, as if disputing with his own echoes."

The nest is usually placed in the upper part of a thick bush, in an almost impenetrable thicket. It is built externally of dry leaves, lined with strips of bark, fibrous rootlets, and dry grass. The eggs are four, light flesh colored, sprinkled over with specks of brown.

The length of this species is seven inches, stretch of wings about nine. Upper parts deep olive green; throat and breast, bright yellow.

Of the sub-family *Bombycillinae* (the Fruit-eaters or Chatterers,) we have two species, one exclusively American, and the other common to both continents.

The common CEDAR BIRD or CHERRY BIRD, (*Ampelis Americana*, Wils., *A. cedrorum*, Baird,) so well known to all fruit-growers, on account of its depredations upon the small cultivated fruits, may be taken as a typical representation of this sub-family. It is found throughout nearly the whole of North America, southward as far as Central America; and throughout this extensive region it rears its young; and is even seen in winter quite far to the northward, being influenced in its migration more by the supply of food than by climate. Small, roving parties are occasionally seen in various parts of this State during this season, stopping for a considerable time wherever cedar berries abound, which, with a few other wild berries, constitute almost their whole food through the winter months; yet I have found them, on dissection, to be exceedingly fat, even in February. These birds, elegant and beautiful in form and coloring, are most voracious feeders, subsisting at all seasons chiefly upon fruits; no kind that they can manage to swallow, either wild or cultivated, comes amiss; with which they occasionally gorge themselves to such intolerable excess, that they can scarcely fly; and in May they sometimes stuff themselves nearly to suffocation with the petals of apple blossoms. Nevertheless they destroy many insects, darting upon them as they pass, in the manner of the Fly-catchers, or pursue them in the air, like Swallows, for a long time together, as I have often observed them do towards the close of summer. Among their own species they are very social, associating at all seasons in small companies, varying from three or four to fifty, and when they alight on a tree, they settle so closely that a single discharge at them will bring down a large part of the flock. In many places, epicures consider them delicate eating. They possess no song, their only note being a simple, feeble screech, which is their call note. One striking peculiarity of this species is its late breeding; while all the resident birds, and those that arrive early, set about this occupation as soon as the beginning of warm weather, some even in April: these birds do not commence nesting till the early broods of some other species have flown; it being generally late in June before the Cedar Birds begin to lay; and I have seen their young not fully fledged the first week in September. The nest is commonly placed in the orchard, and is large and thick, composed of coarse grass and roots of plants, well lined with fine rootlets, moss, and a wooly substance found on several species of ferns. The eggs are four, bluish white, blotched with dark purple and black. Whenever the nest is approached, the female glides off silently, and however the nest may be disturbed, seldom makes her appearance.

Length, seven inches; extent, eleven. Head, with an erectable, high, pointed crest, which, with the neck, is a delicate fawn color, darkening on the back, and passing into bluish slate on the rump; frontlet and lares velvety black; chin very dark, lightening into fawn on the breast, and pass-

ing into yellow on the lower parts; tail tipped with bright yellow. The shafts of the secondaries of the wings are prolonged into small, bright red, oval appendages, resembling red sealing wax. The whole plumage is delicate, the coloring soft and pleasing, and the general contour and carriage of the bird elegant.

The **BOHEMIAN WAX-WING** (*Ampelis garrulus*, Linn.,) is a little larger than the preceding, but similarly colored and ornamented; and some of the earliest writers persisted in calling the above a mere variety of this, from their near resemblance. It is but little known here, being a Northern bird, and is seen here only at long intervals, and in severe winters. It is abundant farther northward, and "millions" are said to be sometimes seen along the borders of the lakes, between the United States and Canada. It likewise inhabits the north of Europe, emigrating southward in winter. In habits it appears to differ but little from the preceding.

August, 1862.

J. A. A.

THE HIGHEST BALLOON ASCENT.

Late English papers contain reports of ascents made by M. Glaisher, an aeronaut, who has reached a higher elevation than had ever before been attained. On a recent trip he ascended to a height of five miles and three-quarters (30,360 feet.) Approaching that point, he observes, the corrected barometer read 10.8 inches. "In endeavoring to read the wet bulb, I could not see the column of the mercury. I rubbed my eyes, then took a lens and also failed. * * I endeavored to reach some brandy which was laying on the table at about the distance of a foot, and found myself unable to do so. My sight became more dim.

I looked at the barometer and saw it at 10 inches, still decreasing fast, and just noted it in my book. Reading was at this time about 9½ inches, implying a height of about 5½ miles, as a change of an inch in the reading of the barometer at this elevation takes place on a change of height of about 2500 feet; I felt I was losing all power, and endeavored to rouse myself by struggling and shaking. I attempted to look at the barometer again; my head fell on one side. I struggled and got it right, and it fell on the other, and finally fell backwards. My arm, which had been resting on the table, fell down by my side. It became more misty, and finally dark, and I sank unconsciously as in sleep."

The writer continued insensible for some time, but his place was taken by a Mr. Cogswell, who ascended still higher, until the barometer is believed to have marked only eight inches, implying that they were then six and a half miles above the ground! The temperature was then some degrees above zero; on leaving the surface it was fifty-nine degrees Fahrenheit. The descent was made without any accident. Pigeons let loose at an elevation of four miles fell down like stones, and were taken up dead on the ground.

SUBSTITUTE FOR YEAST.—Boil one pound of flour, a quarter of a pound of brown sugar and a little salt, in two gallons of water, for an hour. When milk-warm bottle and cork it close, and it will be ready for use in twenty-four hours.—*Exchange.*

For the New England Farmer.

THE VOICE OF AUTUMN.

Within a silent glen I, musing, walked alone;
No flowers were there, no bird to cheer with merry tone
My lonesome way, and make my longing heart rejoice;
But in that shady dell I heard a gentle voice,
A whispering soft, a low, melodious sound,
Amidst the fading leaves which strewed my path around.

It was mild Autumn's song, as she, with busy hands,
Painted the leaves, and spread strange beauties o'er the land:
The words she sang were few, but wise, and softly fell,
Like sweetest music in that wild, secluded dell;
And while she stained the woodland lake, and forest tree,
I treasured up her words, kind friend, for you and me.

Summer has passed away,
No blossoms deck the spray,
No bird with brilliant wings
Within the wildwood sings.

No breath of fragrant flowers,
Lured forth by gentle showers,
Is borne on softest gales
O'er hills and fertile vales.

But I, with lavish hand,
Pour plenty o'er the land;
And load, with yellow grain,
The cornfields on the plain.

And on the boughs I've hung,
Where summer birds have sung
And charmed the perfumed air,
The blushing peach and pear.

Among the tinted leaves
My fancy interweaves,
The golden apples shine—
With grapes I bend the vine.

Around their crowded barns,
Secure from rude alarms,
And want, and guilt, and woe,
The smiling farmers go.

The swamps, and forests old,
I tinge with red and gold,
Till pictures, rich and grand,
Make earth like fairy land.

From nature's glowing book
I teach mankind to look,
With confidence and love,
To Him who rules above.

Her voice is hushed; but mellow echoes of her song
Upon the hills and in the valleys lingered long;
And when her many charms, and magic beauty fled
From Winter's icy breath, and stern relentless tread,
I saw her gild with brightest hues the western sky,
As leaving earth, she soared to boundless realms on high.
October 1, 1862. S. L. W.

CONTROLLING THE INCLINATION.—It is hard work to control the workings of inclination, and turn the bent of nature; but that it may be done, I know from experience. God has given us, in a measure, the power to make our own fate; and when our energies seem to demand a sustenance they cannot get, when our will strains after a path we may not follow, we need neither starve from inanition, nor stand still in despair. We have but to seek another nourishment for the mind as strong as the forbidden food it longed to taste, and perhaps purer, and to hew out for the adventurous foot a road as direct and broad as the one Fortune has blocked up against us, if rougher than it.—*Charlotte Brontë.*

HOUSE WARMING AND VENTILATION.

Those who have made experiments for the purpose of determining the quantity of pure air required per minute by each individual vary in their conclusions. They publish from three to ten cubic feet, but when physiological facts in relation to size of lungs, health of persons and various circumstances are considered, we concede the accuracy of either amount.

We learn by science that the laws of nature do not long permit the enjoyment of health where pure air is not; and also when health is lost there can be no possible recovery of it without the aid of pure air. When we breathe, although the air in the lungs is on one side of a membrane and the blood on the other, a reciprocal action takes place between them. The blood receives, through the membrane, oxygen from the air, and at the same time the air receives from the blood carbonic acid gas and watery vapor. The amount of oxygen and carbonic acid gas thus exchanged are said to be equal—that is, pure air taken into the lungs is expelled with about 85 per cent. carbonic acid gas, and an equal amount of oxygen has been taken from it by the blood.

It appears that a middle sized man, aged about 38 years, and whose pulse is 70 on an average, gives off 302 cubic inches of carbonic acid gas from his lungs in eleven minutes, and supposing the production uniform for 24 hours, the total quantity in that period would be 39,534 cubic inches, (agreeing almost exactly with Dr. Thompson's estimate,) weighing 18,683 grains, or rather more than 11 ounces Troy. The oxygen consumed in the same time will be equal in volume to the carbonic acid gas. See Respiration, under Physiology, in the Encyclopedia Britannica.

It has been shown by experiment that pure air once breathed contains 85 per cent. of carbonic acid, and that the same air by continued respirations would not take more than ten per cent. Hence the necessity in the preservation of health of breathing air but once as it enters and departs from a room. Proper ventilation permits the air to pass away after having been once breathed, for in respiration the air expelled from the lungs being warmed ascends, and is not where it may be received by their next expansion. But if by insufficient ventilation air is breathed more than once, it gives less oxygen to the blood and takes less carbonic acid and watery vapor from it than is necessary for the preservation of health. The efficacious action of the blood ceases because of the deleterious presence of carbonic acid in the blood and in the air. Carbonic acid gas has a little more specific gravity than atmospheric air, but the difference is so slight that when in a current of air it is carried upward, or if where there is no current it tends downward. When a multitude meet in a room which has not been planned to admit fresh air, the carbonic acid gas descends to the floor and from thence it accumulates upward. When it enters the nostrils of the assembly the faces of all become pale, most of them think impatiently of the pleasure of breathing out-door air, and some, perhaps, faint. I am persuaded that the germs of painful sickness and early death are thus often fixed in the human system.

We reflect with astonishment upon the sad consequences of bad ventilation—the great loss of cheerfulness and success in the attainments of in-

tellectual power. A healthy circulation of air is often disapproved by the untutored. As needful medicine which is unpleasant to the taker may be rejected, so a healthy circulation of air by a morbid sensibility may be prevented. Because of bad ventilation children in school may dread their task. For want of pure air perhaps their digestion is impeded. They then feel as if a heavy burden was upon them. If they try to learn they seldom succeed. If they succeed in committing a paragraph to memory it is soon forgotten. Being ignorant of themselves and the cause of their maladies, they judge themselves incapacitated for intellectual pursuits.

It is from the same cause, very frequently, that religious congregations have many members who spend in church an hour of sleepy thoughtlessness, and return home without being able to tell the points of the speaker's discourse, though they had been where one of the most interesting and instructive sermons was preached. It is doubtless because of bad ventilation that the power of the advocate of the Gospel in the pulpit is much less than it would otherwise be. Houses of worship are mostly so constructed that the impure air is driven, by opening the door, upon the preacher. He, in the act of speaking, inhales it more injuriously than others. As a victim he may be marked for an early death. The sympathy and defence which he would have if a wild beast of the forest should assail him in the pulpit does not appear to defend him from the consequences of bad ventilation, which fact is a proof of the absence of knowledge in relation to the subject.—*Artisan*.

For the New England Farmer.

ESSEX CATTLE SHOW.

MR. EDITOR:—I have looked in vain for some notice of the show in Essex County, which took place at Georgetown this week, but find none in your columns. Presuming that a word on the subject will be acceptable, having been present on the last day of the show, I will give my impressions.

The Plowing Match.—This, as is always the case in this county, was well contested, there being eighteen teams in operation. Everything was done as well as it might be, on a field so poorly fitted for the purpose. The field was the worst I ever saw plowed. It was a miserable piece of poor pasture, with no sod; and full of cobble stones; neither fit to be plowed or to produce anything when plowed. If the town cannot offer a better field, they may never expect another show. At least, such would be my opinion.

There was a good number of animals present, but few of them appeared to have been bred with any special regard for improvement. If I do not mistake, I could name farms in the county on which are herds superior to all that were there. This was not as it should be.

The show of horses was creditable; some of them being of the first order, but there were not one-tenth part as many as there should have been in a county where so many horses are owned, and where so much good service is done by them.

Of the *Working Oxen* I cannot speak, never having fancied the experiments of drawing loads of rocks covered with boys, up a steep ascent. This may be a good way of testing their capabili-

ty, but it does not suit my taste. I do not like those modes of labor, that are out of the ordinary way of work.

The show of fruits at the hall was limited, considering the abundance that is grown this season. I know of many a single garden in which a better collection could be gathered.

But when we come to the meetings of the farmers, here is the rub. Some gentlemen had taken up the idea that their talents had been hid under a bushel too long, and started a project to secure an election to the board of trustees. This, after being thoroughly debated, was laid over for a year, by being referred to a committee of one from each town in the county. From which committee a wise report may be expected, on which another discussion will follow. A poor way to grow turnips!

As I have before stated, I have attended every meeting of our Society, and of the Trustees, for the last *forty-four years*, and I regret to say that we are not any wiser than our fathers were, when I first met with them. I think I can hear the shade of old father Pickering saying, "O, wicked and perverse generation—they seek a sign, but no sign shall be given them." P.

October 4, 1862.

REMARKS.—Our correspondent is certainly very plain in his criticisms, but we think he has a right to speak, as, if no error exists, it can be shown,—and if there is, this may lead to its correction. Our attention has been a little withdrawn from the *Farmer* for a few days, in superintending a gang of men who were ditching and laying pipes on a portion of our farm.

VENETIAN WATER CISTERN.

The city of Venice is wholly supplied with rain water, which is retained in cisterns. The city occupies an area of about 1300 acres. The annual average fall of rain is 31 inches, the greater part of which is collected in 2077 cisterns, 177 of which are public. The rain is sufficiently abundant to fill the cisterns five times in the course of the year, so that the distribution of water is at the rate of 312 gallons per head. To construct a cistern after the Venetian fashion, a large hole is dug in the ground to the depth of nine feet. The sides of the excavation are supported by a framework made of good oak timber, and the cistern thus has the appearance of a square truncated pyramid with the wider base turned upward. A coating of pure and compact clay, one foot thick, is now applied on the wooden frame with great care; this opposes an invincible obstacle to the progress of the roots of any plants growing in the vicinity, and also to the pressure of the water in contact with it. No crevices are left which might allow the air to penetrate. This preliminary work being done, a large circular stone, partly hollowed out like the bottom of a kettle, is deposited in the pyramid, with the cavity upward; and on this foundation a cylinder of well-baked bricks is constructed, having no interstices whatever, except a number of conical holes in the bottom row. The large vacant space remaining between the pyramid and the cylinder is filled with well-scoured sea-sand. At the four corners of the pyramid

they place a kind of stone trough, covered with a stone lid pierced with holes. These troughs communicate with each other by means of a small rill made of bricks, and resting on the sand, and the whole is then paved over. The rain water coming from the roofs of the buildings runs into the troughs, penetrates into the sand through the rills, and is thus filtered into the well-hole by the conical holes already described. The water thus supplied is limpid, sweet and cool.

DRAINING WITH PIPES.

Since the admirable work of our Associate, Judge FRENCH, upon underdraining, was published, much more attention than formerly has been given to the subject, and a new step in the *Art of Farming* has been fairly inaugurated. Persons who had no faith in the new power of the soil when relieved of cold standing water under the surface,—or water so slow in motion as to have the same effect as standing water,—by giving investigation and a little thought to the matter, have become so far convinced of its utility as to make *experiments*, and thus demonstrate the reasonableness and expediency of the process for themselves. This has been done to a considerable extent,—not only by those who are called book farmers, but by many who have never been hasty to adopt new notions, and the more trials there are made, the more popular the process becomes. Indeed, we think Judge French's book, written as it is in a manly and vigorous style, and with so many happy illustrations and humorous turns as to make it exceedingly attractive, is having a decided influence upon our people in this direction.

We have visited some old farms where the prejudices of their proprietors were as deep rooted and tenacious as the roots of the skunk cabbage which infested their water-soaked lands, and found portions of them wearing a new aspect in their crops, and smiling under the wholesome influences of a warm, moist and porous soil. Most of the experiments which we have witnessed are quite limited, but are sufficiently large to afford complete illustrations of the advantages to be gained by the process,—and to satisfy the experimenter that it is a *money-making* operation! When this fact becomes common, little argument will be needed to induce our people to make it a matter of common improvement.

A part of the autumnal work on our farm has been that of finishing the drainage of a piece of land commenced in 1857. The locality is a narrow valley, surrounded on three sides by higher land, and only the south-east side was then opened. The upland on the edge of the valley was plowed the preceding spring, but so wet was it, that the work could not be done until the 27th of May, and even then with difficulty, so thoroughly soaked

was the soil. On the following spring, and so on ever since, this land has been worked with comfort, and some portions of it even made into garden beds any time after the 20th of April! At the time of draining, the meadow was dotted with hassock grass, rushes and skunk cabbage, which all disappeared in the course of two years, without the aid of plowing, reseeding or heavy manuring; nothing being applied but a very light dressing of composted manure. It will be seen, then, that the season for farm operations on this piece of land has been lengthened in the spring about five weeks! beyond what it was before drainage had taken place. The period of growth and ripening has also been considerably extended. These results, however, would scarcely justify the belief that this land is capable of producing crops such as are matured in a climate several degrees farther south. Far from it. But it will produce and mature the most abundant crops that it would have utterly failed to bring before,—and bring them at about one-half the cost of labor that is required on wet and heavy land!

The drains have now nearly all been opened on the north-west side of the valley, there being some twenty-five or thirty laterals, of various length, according to the pitch and position of the land, some of them being not more than thirty feet in length, while others are two hundred, all laid with pipe having an orifice two inches in diameter, and discharging themselves into the main drain, laid with pipes of three inches orifice.

This side of the meadow being exposed to the drainage of a long hill with several acres of table-land at its top, we have put the lateral drains only twenty feet apart. They are all four feet deep, so that from the centre, between them, there will be a fall from the surface to the bottom of the ditch of *four* perpendicular feet, to every ten horizontal feet. That is, standing in the centre between two drains there will be a fall on the right hand and on the left of *four* feet to the bottom of the ditch, for each of the ten feet from the centre to the ditch itself. Under such circumstances, the drainage of the soil will take place rapidly, and be of the most thorough character, and the beneficial results to the growing crops, having a warm, moist and porous soil in which to extend and perfect themselves, will abundantly repay all the cost incurred, during each five years hereafter, so long as the land shall be properly cultivated.

On Thursday last several gentlemen came to see the operation as it was going on, viewing, in the first place, that portion of the land drained in 1857, and then the new portion, and comparing the herbage and condition of the two parts. The contrast was so striking as to arrest the attention of all; the drained side being covered with a thick stubble of timothy and red top grasses, in which

was added a sprinkling of uninvited ox-eye daisy, or white weed, while the other side presented the usual appearances of a wet meadow,—hassocks, coarse cut grass, rushes, &c. On retiring from the field, one of the gentlemen observed,—“I would give more for the crops of that land hereafter with *two* parts of manure upon it, than I would for it as it now is, with *six* parts of manure.” If such is the case—and his experience in such matters entitles him to speak confidently—the crops will repay the cost much sooner than our estimate above indicates. The work has been done so irregularly, and so mingled with the other affairs of the farm, that it will be difficult to arrive at the exact cost per acre.

BEST WAY TO DRY APPLES.

The best method that I have ever used to dry apples is to use frames. These combine the most advantages with the least inconvenience of any way, and can be used with equal advantage either in drying in the house or out in the sun. In pleasant weather the frames can be set out-doors against the side of a building, or any other support, and nights, or cloudy and stormy days, they can be brought into the house and set against the side of the room near the stove or fire-place.

My frames are made in the following manner: Two strips of board, 7 feet long, 2 or 2½ inches wide—two strips 3 feet long, 1½ inches wide, the whole three-quarters of an inch thick—nail the short strips across the ends of the long ones, and it makes a frame 7 by 3 feet, which is a convenient size for all purposes. On one side of the long strips nails are driven 3 inches apart, extending from the top to the bottom.

After the apples are pared, they are quartered and cored, and with a needle or stout twine, or stout thread, strung into lengths long enough to reach twice across the frame; the ends of the twine are then tied together, and the string hung on the nails across the frame. The apples will soon dry so that the strings can be doubled on the nails, and fresh ones put on, or the whole of them removed, and others put in their place.

As fast as the apples become sufficiently dry they can be taken from the strings, and the same strings used to dry more on. If large apples are used to dry, they may be cut in smaller pieces.

I suppose that pears, quinces, and perhaps other fruits that can be strung, might be dried in this way, although I have never dried any in this way except apples.—C. T. ALVORD in *Country Gentleman*.

SURFACE APPLICATION OF MANURE.—From the result of various trials, Professor Voelcker seems to lean to the opinion that the spreading of farm-yard compost on the surface of the soil, for even a considerable period before it is plowed in, is by no means so injurious a practice as we have hitherto been led to suppose. He says, “that on all soils with a moderate proportion of clay, no fear need be entertained of valuable fertilizing substances becoming wasted, if the manure cannot be plowed in at once. Fresh, and even well-rotted dung, contains very little free ammonia; and since

active fermentation, and with it the further evolution of free ammonia, is stopped by spreading out the manure on the field, valuable manuring matters cannot escape into the air by adopting, this plan." If this is a reasonable conclusion, it goes far to remove our dread of losing, on such soils, the better portions of farm-yard manure by top-dressings. As the season will soon be here when these dressings are commonly applied to grass, it will be useful to remember this fact. The best time for applying the manure is held, by the great Cheshire grass farmers, to be in the end of September or the beginning of October, particularly in a showery period, as the grass soon covers it, and renders it less liable to be damaged by the sun or drying winds.—*Mark Lane Express.*

A QUESTION ABOUT MANURE.

SHOULD MANURE FERMENT AND DECOMPOSE IN THE BARN-YARD OR THE FIELD?

It is the general practice in this country to allow the manure formed in the barn-yard during the winter to remain there until seeding time in the fall. Is this an economical plan? Does not manure undergo considerable loss in the yard during the warm weather of summer?

It has been calculated by those who have had experience and the means of ascertaining, that for every ten hundred weight of dry fodder, hay or straw used, the farmer may expect from twenty to twenty-five hundred weight of manure, *in the spring.*

This ten hundred weight of dry food and straw will, as before stated, produce from twenty to twenty-five hundred weight of fresh dung, which, at the end of six weeks, will weigh but twenty-one hundred; at the end of eight weeks but twenty; when half rotten, but from fifteen to seventeen; when entirely rotten, but from ten to thirteen.

Thus, we see that, by the time the manure is fully rotten, one-fourth of the weight is lost, and the mass is diminished in bulk one-half. These remarks apply to manure which is left exposed to the action of the sun and rain.

The main loss is in water; but there is a very large loss in ammonia and other volatile substances, which are evaporated by the heat of the sun, or washed out by the rain.

The question, then, is: Would it not be better to haul the manure out to the field in the spring and plow it under, so that what loss by decomposition and fermentation does take place may be absorbed by the soil?

If enriching the soil was the only object in view, it would, without doubt, be most economical to plow the manure under as soon as possible after it is formed; but there are other points to be considered, as, for instance, the state of the soil with regard to texture.

If the soil is light and very open, it would not be economical to plow in long or fresh manure, for it would have a tendency to make it still more so; the rain would wash the soluble portions of the manure too deep before they could be absorbed by the soil, and in this way a greater loss might be created than if the manure had remained in the barn-yard. But in heavy or common soils it is undoubtedly more economical to plow in the straw and other manure while in a long and fresh state, for it will then have a tendency to render

the soil more open and permit a more free passage of the air.

English farmers think this is by far the better plan, for it converts the whole field into a heap of compost, and fermentation goes on slowly, and as fast as the volatile portions are given off they are absorbed and retained by the soil.

The crop for which the manure is applied must also more or less influence the manner of application. If the crop is one which grows quickly and soon reaches maturity, it would not be economical to apply long, fresh manure, for the plant would be done growing before the manure was sufficiently decomposed to affect it much. But if, on the other hand, the crop is one which grows slowly, and it is desirable to furnish it with nourishment throughout its whole growth, then long manure will better accomplish the effect desired than common fermented or decomposed manure.

I consider that I obtain more from my manure by spreading it on the sod and plowing it under for corn, than I do by keeping it, *even with the best care*, until fall, and applying it to the oats stubble to be plowed in for wheat.

I think that the corn crop appropriates what would be lost by evaporation, had the manure been retained in the barn-yard in the usual way. And when seeding-time comes in the fall, the manure is thoroughly incorporated with the soil, and is ready to fertilize the wheat as soon as it begins to grow.

I do not find from several trials that the oats are sensibly affected by the manure, as I do not turn it up when plowing for oats.—*Germentown Telegraph.*

For the New England Farmer.

AGRICULTURE IN SCHOOLS.

I have often read the speculations of Mr. Goldsborough, with respectful interest, but I must confess, that I do not agree with him, when he says that "boys cannot be educated for the farm in our public schools." Pray tell me what is the purpose of schools, if not to fit children for the business they are to follow in after life, and what business can be more important to the community than the culture of the soil?

May not thirty years of pedagogical drill have warped the mind of Mr. Goldsborough, so that he thinks more highly than he ought to think of his mode of school teaching? I think his communication shows a little of that irritability for which school teachers are apt to be distinguished.

South Danvers, Sept. 20, 1862.

SENA.

HOW TO MAKE CIDER WINE.—J. H. Keck, of Macon Co., Ill., gives the following method in the *Country Gentleman*:

Take pure cider, made from sound, ripe apples, as it runs from the press, put 60 pounds of common brown sugar into 15 gallons of the cider, and let it dissolve; then put the mixture into a clean barrel, fill it up within two gallons of being full, with clean cider; put the cask into a cool place, leaving the bung out for forty-eight hours; then put in the bung with a small vent, until fermentation wholly ceases, and bung up tight, and in one year it will be fit for use. This wine requires no racking; the longer it stands upon the lees the better.

For the New England Farmer.

RETROSPECTIVE NOTES.

"HOW SHALL THE FARMER IMPROVE HIS MIND?"—This is the caption of an article in the *Farmer* of Sept. 20th, and in the monthly issue for Oct., at page 478. It appears to have been called out by a few remarks which were made by the writer of the present communication upon an excellent article on "Mental Culture," which may be found at page 315 of current volume of the *Farmer*, but unfortunately upon a misinterpretation of them. If Mr. White, the author of the article on Mental Culture, will once more refer to the remarks made by the present writer, on page 386 of current volume, he will find that what he calls a "pretty severe criticism" is in reality a very mild one. He will find that his article was credited as containing some very good thoughts, while only a small portion of them was considered as "not well adapted for use among common (that is, hard-working,) farmers." His ideas concerning the cultivation of the farmer's mind were not considered nor called "Utopian and impracticable," at least not *in toto*, and at most as only not well adapted for use among hard-working farmers. The present writer recollects very well that he highly appreciated and approved Mr. White's remarks on mental culture, when they first appeared, and most earnestly wished that the whole fraternity of farmers would read and give heed to them, as far as it might be possible for them, being confident that if farmers generally would give heed to such suggestions, *benevolently* submitted for their profit and improvement, they would not only secure an increase of power, of enjoyment, and of self-satisfaction, but also contribute to the elevation of the fraternity in the general estimation, and to an increase of their influence,—usually a good one, and of a higher moral tone than that of some other classes of society—upon the choice of men for office, and upon the administration of public as well as all other affairs. Mr. White's remarks were appreciated and credited as highly meritorious, not merely for the aim or object which he obviously had in view, viz., the improvement, advancement and elevation of the farming fraternity, but also for the excellence and utility of the suggestions and thoughts presented. Such was the impression made by the bulk of the article of Mr. White, and it was only feared that, in recommending, as one essential requisite to mental improvement among farmers, that they should have a study or room by themselves, in which they were to devote an hour or two of every day to mental improvement, Mr. W. had not made *due allowance* for the difficulties and often insurmountable obstacles which stand in the way of carrying out such a proposal into practice. Tired and sleepy as most *working* farmers are in the evening, how very few of them would think it worth while to kindle up a fire in a study or separate room for any such purpose, and how few of them would be able to keep from falling asleep over their books or papers even if there were a room already warmed and ready for use! Here and there, there may be one or a few, to whom such advice is sufficiently well adapted, but for the mass of hard-working farmers it is still thought that that one portion of Mr. White's suggestions was "not well adapted for use." No one would

more heartily rejoice, or be more ready to indulge in high hopes of a good time coming, than would the present writer, if only he could banish such fears, or even half persuade himself that a large majority of his brother farmers were *so resolutely bent* on the increase of their mind-power, and on the elevation of themselves and their brother farmers to a higher rank, and reputation, and influence, that they would allow no winter evening nor any other leisure hours to pass without being made to contribute in some way to these worthy objects. Were the farmers generally but fired with such an ambition, and resolutely bent upon making every day and every hour contribute more or less to the accomplishment of the objects just specified, they would then either adopt such a plan of separate study as that proposed by Mr. W., or they would make the common sitting-room for the family a scene like a school-room where either some one read for all, and all made remarks on what was read; or the father heard some of the children recite some appropriate lesson, or questioned them as to some study or course of reading; or each was busy in reading, writing, conversing and comparing ideas, or other mental exercise:—and all this mental activity and busy employment of leisure hours would naturally follow as a spontaneous outflow from the fire of ambition and resolution within. Once let the love of improvement, and the desire of possessing a well-stored and a vigorous mind, be kindled up within, and though individuals may here and there adopt the plans proposed or followed by others, yet usually each individual and each family will have some peculiarity in their methods of employing their time and the materials at their command, according to peculiarities in their circumstances, the tastes, the means, the literary helps, &c., of such individuals or families.

The great pre-requisite of mental culture is, therefore, a deep, fixed, persevering, all-conquering love of knowledge and of mind-power; with this each individual, family, or mutual-improvement club, will readily devise or soon discover the methods best adapted to their particular circumstances, better than an outsider could prescribe a well-adapted plan; and without this love of improvement and of knowledge as a mainspring within to keep the mental machinery in motion, the best plan that may be proposed will be unheeded and fruitless. Thanks and praise are due to Mr. W. for his efforts to improve and elevate the farming and laboring classes.

P. S.—The writer of the foregoing regrets very much that, owing to a limited amount of space and time at his command when he penned the brief comments made on Mr. White's article on Mental Culture, he should have expressed his views so incompletely, as to leave any room whatever for the construction put upon them by Mr. W. He regrets that Mr. W. should have had any occasion whatever for deeming the writer's remarks as "severe criticism," or for having his feelings wounded in any degree whatever. Still, it seems that, after perusing the foregoing remarks, Mr. W. will perceive that he did not exactly understand the purport of the criticisms which to him seemed severe, and that they were not so unappreciative or condemnatory as he seems to have supposed them, most probably from a hurried glance.

Notwithstanding the severe sentence which he thought had been pronounced upon his views, Mr. White deserves *much credit* for the *unresentful* and *truth-loving spirit* in which he noticed the supposed severity. He represents himself as perfectly willing to have his opinions called in question, and subjected to a sifting process. He obviously cares *more* for the establishment and dissemination of the *truth*, than of any particular or favorite views of his own. Would that such a spirit were more prevalent than it is. There would be less unseemly controversies and less embittered feelings among those who differ in their views.

How very different the spirit in which a writer on page 474 notices the article of "More Anon," in which the latter calls in question some of the opinions advanced by the former. It is a spirit of wounded self-esteem, and of baseless resentment, and not of love of truth more than of individual opinions.

MORE ANON.

THE APPLE TREE BORER.

We hear so much of the damage done by the apple tree borer, and have so many personal inquiries in relation to the pest, that we make special use of the following note, instead of transferring it, as usual, to the column of "Extracts and Replies."

BORERS IN APPLE TREES.

I want to know if there is any way to get rid of, or prevent, the apple tree borer? I have an orchard of about fifty-five trees, young and old, and I have dug out about one hundred borers, this season, from them. Some of the young trees are badly hurt by them. I saw two articles, (in the *Monthly Farmer*, I believe,) to get rid of them; one was to dig away all the dirt from around the tree, and the other was to pile up dirt around the tree. I have never tried either. For three or four years past I have put a little pile of ashes around each tree; but it does no good; they increase every year. My trees are on good ground, stony and warm, and top-dressed every year. The apples are a good deal wormy, and I always pick up the windfalls and put them in the hog-pen. The trees grow middling well, and I keep them well trimmed and cared for.

CHARLES D. BARTLETT.

West Hatfield, Oct., 1862.

We have more than a thousand fruit trees on our little farm, and have never yet seen a borer among them, nor the effects of one on any of the fruit trees. A few fine young locust trees were entirely ruined by the beetle named *Clytus pictus*, or the *painted Clytus*, we suppose, which stood only a short distance from several apple and pear trees.

The modes recommended on all sides, seem to be simple and few, by which to prevent or destroy these pests. Downing says the most effectual mode of destroying it is that of killing it by thrusting a flexible wire as far as possible into its hole. We have practiced this on the trees of

some of our friends, and with pretty good success. This practice will be a perplexing one at first, by not understanding how to manage the wire, and secondly, in being puzzled to find the hole of the depredator. The first difficulty will vanish after a little patient practice, and one will be able to move a soft, flexible wire in almost any direction which the hole may take. The second requires some knowledge of the habits of the insect, whereby the evidences of its presence may direct us to the creature himself. It appears that the butterfly, or miller, that produces the borer, flies in the night, and deposits its eggs in the bark of the tree, and generally quite near the ground, during the months of June and July. It is supposed that it remains in the tree, in the grub state, two or three years, before it comes out in the butterfly form. It is while here in the grub state that it destroys the fruit trees.

Harris states that some of these borers always keep one end of their burrows open, out of which, from time to time, they cast their chips, resembling coarse sawdust; others, as they proceed, fill up the passages behind them with their castings, well known among us by the name of powder-post. These borers live from one year to three, or perhaps more years, before they come to their growth. They undergo their transformations at the furthest extremity of their burrows, many of them previously gnawing a passage through the wood to the inside of the bark, for their future escape. When the beetle has thrown off its pupa-skin, it gnaws away the thin coat of bark that covers the mouth of its burrow, and comes out of its dark and confined retreat, to breathe the fresh air, and to enjoy for the first time the pleasure of sight, and the use of the legs and wings with which it is provided.

It has been seen that the eggs are deposited in June and July. By the middle of August they have been hatched, and the grub so far grown as to be able to go to *boring* into the tree, and to *cast its chips* forth. Now is the time to detect his whereabouts, and a little careful practice will enable the orchardist to notice the chips which adhere to the tree, by their damp appearance and different color from the bark. They may also be found on the ground, directly under the hole. When this process is understood, it is not a difficult task to visit quite a large number of trees in a day, and give the invaders their quietus. The wire should be flexible, and the end held turned over so as to enable the hand to grasp and hold it firmly. File or grind the other end flat and sharp, and then turn it up the sixteenth of an inch, which will frequently enable the operator to pull the grub out.

Some recommend to burn a sulphur match in the hole, to plug it with camphor, to place a small

mound of ashes or lime about the collar of the tree, to wash with potash water, soap-suds or lime, and various other remedies. But the true one, after all, we believe to be the use of the wire.

It is said by Downing, that where orchards have already become greatly infested with this insect, the beetles may be destroyed by thousands, in June, by building small bonfires of shavings in various parts of the orchard.

Cole says, keep the trees smooth and well washed, that insects may have no harbor. Wash them in June, July and August, in a rather strong



lye of wood ashes; or with two quarts of soft soap and one-quarter of a pound of sulphur to two gallons of water, which is still better by adding tobacco, hen manure, and a little clay to make it adhesive.

We present herewith a cut of the borer in its perfect state, and of the full grown borer in the grub form. It occasionally deposits its eggs in the trunk of the tree several feet above the ground,—but this is rarely the case,—and it very seldom penetrates the limbs.



For the New England Farmer.

CATTLE SHOWS.

This is the season of the year for these institutions to flourish. But the war, or some other cause, has in a great measure put an extinguisher upon them. If the same feeling should continue for several years, they would have to be given up entirely. I have seen no adequate reasons for this feeling, and only speak of the fact, as it has come to my observation. On reflecting upon it, the question has arisen, whether the plan hitherto pursued, of exhibiting a few select superior animals, was the best to be adopted for improving the breeds of animals; or whether it would not be better to bring forward entire herds of twenty, or more, bred and reared on the same farm, in a period of four or five years. This would lead to a selection of the best animals as breeders, and would establish the best modes of managing them.

October, 1862.

MASS.

KEEPING WINTER SQUASHES.—There is just this one simple rule for keeping winter squashes: Put them in a dry, warm place, and they will not rot. It is a warm, damp atmosphere, like that in moist cellars, that causes decay. A dry stove-room or furnace heated room, which never gets cold, or a closet near the fire-place, which never gets cool enough to freeze, are good places in which to winter squashes and pumpkins. They also keep well hung up in baskets or bags overhead in the kitchen or on a hanging shelf. They should always be stowed singly—never in piles—when you wish to preserve them a long time.

THINNING OF FRUITS.

We attended the meetings of the *U. S. Pomological Society*, recently held in this city, and listened to the proceedings with much interest. We found the members as earnest in debate, and as tenacious of their opinions as though discussing some grave question of a material character, and the enthusiasm manifested gave the whole a lively and pleasant character. Enthusiasm gives tone, color and attraction to everything we do, and even in our deliberative assemblies, without it, they seem but a dignified set of owls or automaton.

The address of President WILDER was an excellent one, and was listened to with an unmistakable gratification. Below, we give some of its leading thoughts, with the intention of quoting again at a future time. What we present now, is earnestly commended to every reader.

One lesson which experience has taught us, is the importance of thinning the fruit, especially of apples and pears. This branch of pomology has received comparatively but little attention. There is a limit to the capacity of all created things. If you tax the energies of an animal too severely for a long time, the result will be premature age and decay. Subject any vegetable or mineral substance to too great pressure, and you destroy its powers of cohesion. So if you permit a tree to bear beyond its strength, you injure its fruit, retard its growth, and shorten its life. All have observed that superfecundity one year, produces barrenness the next. Hence we hear among our farmers and gardeners of what they term the bearing year. They invariably designate the Baldwin apple as a tree that bears on alternate years. But is not the cause of this alternation found in the fact that the abundant crop of the bearing year exhausts the energies of the tree, and absorbs the pabulum so as not to leave sufficient aliment for the formation of fruit spurs the succeeding year? Many varieties have a tendency to overbearing, especially those which produce their fruit in clusters. Nature herself teaches us the remedy for this evil, and a superabundance of blossom is generally followed by a profuse falling of the embryo fruit. When and where this dropping is not sufficient to prevent overbearing, we should resort to the process of relieving the tree of a portion of its fruit.

The organism which carries on healthful development, in order to repeat its cycle of functions from year to year, cannot be overworked without time for recuperation. Whatever of nutrition goes to the support of useless branches, or a redundancy of fruit, abstracts that strength from the tree which would otherwise be appropriated to the perfection of the crop, and the development of the spurs which would bear fruit the next year. One of the best cultivators in the vicinity of Boston, has reduced this theory to practice, with the happiest effect, in the cultivation of the pear. His system allows no useless wood, nor more fruit, than the tree can properly sustain. As a consequence, he produces every year superior fruit, which commands the highest price. Some have doubted whether this practice can be made remunerative, except in its application to the finer fruits. But another cultivator, who raises an annual crop

of the best apples, assures us that the secret of his success is the thinning of the fruit, and he has no doubt of the economy of the practice. No good farmer doubts the necessity of thinning his root crops, no *vigneron* the propriety of thinning his grapes. Analogy of cultivation, therefore, justifies the practice, and I entertain no question of its great importance.

Light, air and moisture are essential to the production of vegetable products, and especially of fine fruits. Who has not observed that the best specimens of fruits on a tree are ordinarily those which are most exposed to these elements? Who does not select the full-sized ruddy fruit, which has had free communion with light, heat, and air, in preference to the half-fed specimen which has shared its own proper nourishment with five or six crowded rivals on the same spur?

An experienced English cultivator says: "The bending of branches of trees by an overcrop of fruit, is most injurious, for the pores of the woody stalk are strained on the one side of the bend, and compressed on the other; hence the vessels through which the requisite nourishment flows, being partially shut up, the growth of the fruit is retarded in proportion to the straining and compression of the stalk." This is illustrated in the overbearing of some varieties, which, from a redundancy of fruit, without the process of early and thorough thinning, seldom produce good specimens, and in a few years become stunted and unhealthy trees. The overbearing of a tree is as much a tax upon its energies and constitution, as is the exhaustion of a field by excessive crops of the same kind, year after year, without a return of nutritive materials. Inexhaustible fertility is a chimaera of the imagination. Sooner or later, the richest soils will require a restoration of what has been abstracted by vegetation. However fertile at first, the constant overcropping of the soil is a reduction of the elements on which health and fruitfulness depend. This great principle of sustenance and reciprocal relation runs through the whole mass of life, of mind and of matter.

Intimately connected with this process of thinning, is the time when the work should be executed. It should not be done before we can distinguish the choicest specimens in a cluster of fruit, nor delayed so long as to waste the energies of the tree. This practice, judiciously followed, will supercede the necessity of staying up the branches, will prevent injury to the tree by their breaking, and will prove decidedly economical.

Associated with the thinning of fruits is the expediency of gathering a part of the crop as soon as it approaches maturity. The remaining specimens will thereby be much increased in size and excellence. The fruit of a tree does not all come to maturity at the same time, hence this successional gathering will turn the crop to the highest practical account, and will keep the productive energies of the tree in a healthful and profitable condition.

TREATMENT OF HORSES' FEET.—Mr. Gamgee, Sen., in the *Edinburgh Veterinary Review* for August, says:—"The day will, I believe, soon come when people will not allow cutting instruments to touch the soles of their horses' feet. I have said in former papers that the wall, sole and frog are so constructed that they mutually co-operate, and

that the intermediate horn, which I have shown is secreted between the wall and sole at their union, is also required to be left entire; but, by the prevailing custom of cutting the hoof, these substances, which in their nature are rebounding springs, are destroyed or greatly impaired. The custom of thinning the sole, and likewise of keeping that part always in cow dung, or other wet soddening material, under the name of 'stoppings,' was brought much into vogue after the establishment of our first veterinary schools."

BENEFITS OF AUTUMN PLOWING.

The tillage and drainage of the soil are very closely related to each other. So indeed are the tillage and manuring the soil. And these, not merely as cause and effect, are related—though drainage does enable tillage, and tillage does alter composition—but as being operations of the same class and kind. And thus Mr. Bailey Denton, though engaged in a lecture upon land drainage, could not help referring to the steam-plow—as the great tillage implement of the future. And we had from him, too, the striking fact bearing on the composition of a fertile soil, that in a state of perfect tilth one-quarter of its bulk is air.

Mr. Smith, of Lois-Weedon, says that in all clay soils containing the mineral elements of grain, perfect tilth dispenses with the need of manure; and there cannot be a doubt that a deep and thorough tillage enables the soil to draw immensely on the stores of vegetable food contained in air and rain. Messrs. Hardy again say that perfect tilth dispenses with the need of drainage, and there can be but little doubt that deep and thorough tillage facilitates the operation of whatever drainage may exist, whether it be natural or artificial.

In both these cases, the useful lesson is well taught, that it is true economy rather to put the cheap and copious storehouse of Nature's agencies to its fullest use, than by laborious and costly artificial means to imitate expensively their operation.

Such a lesson applies, beyond the advantage of tillage, to the methods by which tillage is obtained. Among the earliest suggestions of cultivation by steam power was that of reducing by its means the soil to tilth at once. The land was to be torn down as the deal is torn down at the saw-mill; though before the machine it may have been as hard and firm as wood, behind the tool as it advanced at work, it was to lie as light and fine as sawdust. But it has at length been found that it is better to leave this last refinement of the tillage process to the weather, which does it without cost. The land is now torn—smashed up—or moved and thrown about by plow or grubber in great clods and lumps. This is best done in dry autumn weather, and thus it lies till spring. Certainly no climate is better adapted for cheap tillage than the English—the rains and frosts of winter following a dry September and October must penetrate and thrust asunder the clung and hardened masses of the soil. No two particles shall remain adhering to each other, if you only give room and opportunity to the cheapest and most perfect natural disintegrator in the world.

No rasp, or saw, or mill will reduce the indurated land to soft and wholesome tilth, so perfectly as a winter's frost. And all that you need to at-

tain its perfect operation is, first, to provide an outlet for the water when it comes—by an efficient drainage of the subsoil, and then to move the land while dry, and break it up into clods and fragments, no matter how large they be, and leave for alternate rain, and drought, and frost, and thaw, to do their utmost.—*London Agricultural Gazette.*

EXTRACTS AND REPLIES.

PULLING-BACK HORSES.

Can you, or any of your readers inform me if there is any way to break a horse of the habit of pulling back when hitched? I have a horse, as free from faults, perhaps, as most horses, who will break away when hitched in a shed, stable or elsewhere. As I am no horse jockey, I am afraid if I trade him off I shall get a worse one, and therefore think it is best to keep him; but it is not safe to leave him, either hitched or unhitched. I once heard of a man who owned a horse with this habit and accidentally broke him of it by hitching him on the bank of a mill-pond, and the horse pulling back landed in the water. But it seems to me this might prove a dangerous experiment.

I once owned a horse who was lame most of the time from corns on the feet. I cured him by building a new stall for him so he could stand on the ground, and I would recommend this to any one having a horse similarly affected. N.

South Walpole, Oct. 12, 1862.

REMARKS.—We once had a colt addicted to the same bad habit. She would break a three-quarter inch new rope as though it were a tow string. We had a halter made double, and of the best materials, and was confident that no horse could break it. It was used upon her in the stable for several days. Whether she made any experiments upon it or not, we never knew, but were always careful not to hitch her to a post, or anything else, that she could start. In a few days we had occasion to leave her while pulling a wagon from the barn floor, and hitched her to a post firm enough to hold two or three horses. When approaching her from the barn, she suddenly settled back upon her haunches and gave two or three tremendous jerks that made her tremble at every joint. When near enough we gave her a sharp touch over the head with the whiplash, when she tried the experiment once more, and that was her last. After that, a piece of common twine was sufficient to hold her in the stall or to any post. It will cost little to make the trial, and it is attended with little or no danger. So long as a horse continues to break his halter, or to remove what he is hitched to, he is encouraged to have his own way, and the habit is strengthened by every repeated success. Let us know the result.

FENCES—AN EXPLANATION.

The *Farmer* for August contains a communication from South Amherst signed "A Farmer," in which he complains that I had written two articles in reply to his in relation to my fence and that I

"had associated him in an ungentlemanly manner with a bad man, and furthermore had injured his feelings by giving him the right to build it, to keep him out of the way of temptation."

In reply to the first accusation I will say that the first article was not intended for publication, but a private note of explanation to the editor, although I omitted to mark it as such. The reflection that no one but himself knows who is hurt, should, at least, mitigate the second charge and the third, "to be kept from temptation" has been the prayer of the wise and good in all age of the world.

If it will not be ungentlemanly I will ask him to send me his name by letter, so that if further apology is necessary I can make it in the same way.

Perhaps this will not appear unreasonable, when it is known that I have caused inquiries to be made and have been unable to find him or his fences. C. R. SMITH.

Haverhill, N. H., Oct., 1862.

FOWL MEADOW SEED.

Noticing in the monthly *Farmer* for October an inquiry for fowl meadow seed, I would say that I have some two or three bushels of seed, pure and fresh. A sample having been sent to the editor of the *Boston Cultivator*, was pronounced very pure. There is not much sale for it here, as our farmers have not got in the way of using it, but I think highly of it. On one piece I have, it is slowly working its way into the lower land near it, rooting out bulrushes and the like. I would like to dispose of the seed, and would deliver at the depot to any address, at market price.

WILLIAM A. SWALLOW.

Nashua, N. H., Oct., 1862.

For the New England Farmer.

FALL WORK.

The busy, I might almost say busiest, time of the year has come suddenly upon us. Farmers' wives step quickly, talk briskly and work mysteriously. Various curious dishes are concocted, and put away for winter use. The curtains are stripped from the windows, the carpets from the floors, and woman reigns as furiously, and a little more so, as she did when spring cleaning engrossed her attention. Up stairs and down she flies, ever busy, ever cheerful, no matter how much work she has on hand, if her heart only be easy. But, alas, how many wives and mothers are doing their fall work, now, with drooping spirits and lagging steps, thinking of some loved one, who is far from home, fighting, and perhaps dying, for his country.

The nicely made pots of preserves are set aside with a sigh, and may be a tear, as the half-uttered wish wells up from the heart, that Jamie, or George, or Fred might sip from its luscious sweets; but they, dear fellows, think themselves lucky to get enough good wholesome food to appease their voracious appetites, without hardly casting a thought upon the sweetmeats they know are probably being prepared at home, and which operation they once loved so well to watch. But cheer up, wives, and mothers, and sisters of the brave men who have gone to help save the "Dear old Flag"

from destruction, remember the fall work must be done, and shall our women falter because the men are away, because their loved ones are nobly doing their duty? No! never! but with true heart, let every woman do her usual share of work, and more, also, if need be, and leave the result with the Allwise Father, who ruleth over all things. The pleasant month of September glided quietly away, and soon October will be gone. With preserving and pickling, sewing and cleaning, remaking, removing and remodelling, the farmer's wife has no spare time upon her hands. She is never at a loss about disposing of the hours, but sometimes wonders how so much work can be done in so little time. The sere leaf is rattling to the ground, and each day she has new proof that winter will soon, with cold fingers, clutch all within his icy grasp. Much is to be done, ere he succeeds. Sometimes she gets almost discouraged, but as one job after another is disposed of, she becomes cheerful and happy, and with eager step performs her round of duty.

O, for one more sight of a farmer's kitchen fifty years ago. The open fireplace, with its rousing back log, sending bright flashes of ruddy light over the white sanded floor. Its long strings of golden pumpkins hung to dry, its rack of apples, cut and cored and drying also by the rosy fire, its bunches of "herbs" hung high above the reach of mischievous boys and girls, its hooks drove strongly into the plastering overhead and supporting slim strips of wood, upon which things can be spread to air or dry, while on the ends swing "the hats of all, both great and small," when the owners do not need them on their heads. It was a picture bright with love and comfort, but 'tis gone, and I see only a small, warm kitchen, with its polished cooking-stove and well arranged appurtenances.

I've sometimes thought I would discard all modern improvements, and go back half a century, but ah, me! we modern women could not stand one-half the wear and tear our grandmothers did, and it is well, perhaps, for us that we live in such an enlightened age, when everything goes by steam!

SARAH.

West Amesbury, Oct., 1862.

MASSACHUSETTS HORTICULTURAL SOCIETY.

The annual meeting of this Society was held on Saturday for the choice of officers. Joseph Breck, after serving the society as President four years, declined a re-election. The following officers were chosen:

President—Charles M. Hovey, Cambridge.

Vice Presidents—J. F. C. Hyde, Newton; C. O. Whitmore, Boston; W. E. Strong, Brighton; George W. Pratt, Boston.

Treasurer—Wm. R. Austin, Dorchester.

Corresponding Secretary—Eben Dwight, Dedham.

Recording Secretary—F. Lyman Winship, Brighton.

Professor of Botany and Vegetable Physiology—John L. Russell, Salem.

Professor of Zoology—J. W. P. Jenks, Middleboro'.

Professor of Horticultural Chemistry—A. A. Hayes, Boston.

HOW TO MANAGE FRUIT SEEDS.

The seeds of most kinds of fruit trees should be planted in the autumn.

The seeds of stone fruit—peach, plum and cherry—should be cleansed from the pulp as soon as ripe, and either planted, or put into sand immediately. If seeds are left in the pulp until after fermentation has commenced, their vitality will be injured, if not destroyed. So, too, if permitted to remain out of the ground all winter and become dry, they do not start so readily as if planted in the autumn.

Cherry pits are sometimes put into a box and mixed with sand, and placed where the frost of winter will act upon them, and then planted in the spring. I do not like this plan, because the seeds start very early, sometimes before it is convenient to plant them. The little plants are very tender, and so easily injured that many are destroyed by the removal from the sand to the seed bed.

The safest way is to prepare the seed bed early in the autumn, scatter the seeds in rows upon the surface, covering lightly with earth, and leaving spaces between the rows for the purpose of passing along to weed the bed. The rows may be six inches, or a foot wide. Some people sow broadcast, leaving no spaces, but in that case, if the bed is a large one, the process of weeding will be somewhat tedious, and many plants will be trampled upon and destroyed.

At one year old, many of the seedlings will be of a suitable size to transplant to the nursery rows for budding.

Plum pits may be treated the same as the cherry.

Peach pits are sometimes left in barrels over winter, cracked in the spring and planted in the nursery rows. This is not a good plan.

Prepare a piece of ground in the autumn, scatter the pits upon the surface, cover slightly with earth and the frost of winter will crack them.

By the middle of May the plants will be coming up; they must then be taken up carefully, with a transplanting trowel and set in the nursery rows. The rows four feet apart, and the plants about nine inches apart in the row.

By this method, the trouble and exposure of cracking by hand is saved; the rows are full, and there are no gaps, where the seeds refuse to vegetate, as is often the case where the stones are cracked by hand in the spring and the seeds planted in the nursery rows.

Peach stocks should be budded the first year.
—Prof. J. C. Holmes, in the *Ohio Farmer*.

We would suggest an improvement in the mode of planting the peach, founded on the natural planting, which occurs when the fruit dries up and decays on the tree, and the pit afterwards falls, planting itself in the soil.

The pits, *uncracked*, should be put out in the autumn, in rows two feet apart, and one foot or more apart in the rows—each pit forced into the ground, point downward, so that the wide or spongy end shall be upward. During the winter, this spongy end will receive moisture, and when frozen will split the shell, permitting the kernel to germinate in the spring in precisely the right position. For if the pit should lie on its side, it will be likely to produce a diseased tree with the

cotyledons below the surface of the soil. It is well known that the germ is in the upper end of the pit, and the tree, when formed, can only be straight when the pit stands erect to germinate; otherwise the parts below the surface of the ground will be crooked, and if split when one year old, the pith will be found to have changed color just below the earth-color. If any of the pits should fail to germinate the rows may be filled up by transplanting. By this mode the nursery rows will be formed at the outset, and the plants will be ready for budding in due season.—*Working Farmer.*

HEADING LATE CABBAGES.

It sometimes happens, either through the lateness of the season, or neglect in early planting, that cabbages do not head completely before cold weather sets in. These are often fed out to cattle, or thrown away, while by a little care they might be made to head during the fall and early winter. To accomplish this, proceed as follows: First, make a wide trench and transplant the cabbages into it, setting them together in a triple row. At each end of the row, drive in a crotched stake, and lay a rail from one to the other, to form a ridge-pole a foot or more above the cabbages. Make a roof of old boards or slabs, one end resting on the pole, and the other on the ground, so as to shed water. Over this, lay a little straw, six or more inches thick, and when winter sets in, put on as many inches of earth, making the surface smooth and hard, so as to be nearly rain proof. At each end of the row, leave a ventilating hole, which must be loosely filled with straw in cold weather. Cabbages so managed, will continue to grow, and will fill up their heads considerably before midwinter. When taken out in spring, they will be tender, crisp and beautifully blanched.—*American Agriculturist.*

BRACKETT'S SEEDLING GRAPE. No. 1.—We have had the pleasure of tasting this fine fruit and desire to call the attention of our readers to the description of it, given by the Committee of the Massachusetts Horticultural Society in their report, which will be found in Mr. Brackett's advertisement in this paper. In addition to what the committee say of it, we will add that it is a very large size grape, growing in large bunches, frequently weighing a pound, and often shouldered, though not always. This grape was the result of careful hybridization, and while the vine has every characteristic of the native variety, securing it hardiness and vigor, the fruit possesses the rich and vinous qualities of the foreign grape. Among the many new varieties of this fruit which are being introduced, we have yet seen none which surpass this one, and it is so incomparably above the specimens of native grapes which are so frequently sent us, that no comparison can be made between them. It is far cheaper to bestow the care and labor of transplanting and training a vine, upon one such plant as this, than to attempt to raise a good fruit by wasting the same attention

upon a seedling from the woods. We bespeak for the seedling of Mr. Brackett the share of attention which it merits, and shall have more to say of it in future.

LADIES' DEPARTMENT.

For the New England Farmer.

RECEIPTS.

Perhaps a few well tried receipts will be of some help to the numerous readers of the *Farmer*.

TOMATO PICKLE.

Take hard, green tomatoes; wipe, slice and sprinkle them over with fine salt. Let them stand twelve or fourteen hours, then pour off the water that has collected. Boil in good, sharp vinegar, with a bag of spices, some whole mustard and a few pieces of nutmeg; strain the vinegar or not, just as you choose, and put in the tomatoes; boil them till soft, skim them out very carefully into a jar, so as not to mash the pieces up, and pour the boiling vinegar over them. Keep in a cool place, but do not freeze, as it will spoil it.

SWEET PICKLE.

Take peaches, pears, tomatoes, grapes or plums ripe, but not soft, and peel them. Prepare vinegar by putting in brown sugar enough to make it to suit the taste, and boiling in all kinds of spice, clove in particular. Put in the fruit and boil till tender, being very careful not to break it. Take it out when tender and boil the syrup down very thick and pour over the fruit. Eat with meat or bread and butter. It will be found delicious.

TOMATO FOR WINTER USE.

Take nice ripe tomatoes, scald and remove the skins, put in a pan and boil till all soft, then having placed bottles in cold water and heated it to a boil, pour your tomato into the hot bottles, and seal with wax, made of resin and a little beeswax. Seal hot. When wanted, open the bottle, pour the tomato into a saucepan, put in a small piece of butter, half a teaspoonful of salt, two great spoonfuls of sugar and a little pepper; heat to a boil, and eat with dinner or tea. If the bottles are well sealed, the tomato will be found as nice in January as it is now, and if you lose it, you lose nothing but your labor and the tomato, the fixins not being in.

SARAH.

West Amesbury, 1862.

CRINOLINE AMONG THE ORIENTALS.—The French papers publish accounts of the expedition of M. Lambert to Madagascar. Its object being primarily the spread of civilization and toleration, the envoy took out for the princesses of that island an abundant stock of crimson robes, having skirts resplendent with embroidery, sent by her imperial Majesty. But the object of universal interest among the fair was the expanding crinoline, which took everything else down, the only question being whether it should be worn above or beneath the dress. A French officer says that one of Radama's daughters decided on wearing the "cage" on the outside, and probably that will be the fashion in Madagascar.

THE BABY PAYS.

I have never known a house without a baby that got along as well as other houses. I never knew a baby that didn't pay its way in smiles and kisses to deguile the toil-worn and weary.

"I was going out to-day to get some steers to fat this winter, if that fellow had paid up his note yesterday," says Wm. Nickson, as with a corrugated brow and sad look, he sat down by the kitchen stove.

"My dear, I thought you had twenty steers now," gently replied the wife.

"Twenty! and what are they to eat up a hundred acres of corn that wont pay for hauling to market at a shilling a bushel. This miserable war!"

"Wab, wab, wab," says the baby, and the father's eyes mechanically wander to her, where she is locomoting along the floor froglike, as fast as hands and feet can carry her.

"Patty cake," says the older brother, and as baby crowsingly responds, the care-wrinkled brow of papa relaxes, and the corners of his mouth begin to twitch.

"You mind how she singed for a preacher on Sunday?" says little Charley.

"There never was such a baby!" says papa, as he snatches up the little chit, and kisses the hands that would fain twine themselves in his whiskers.

The steers and the cares are forgotten, and after a merry jaunting of baby to "Banberry Cross," he goes out to his field hands a better and happier man.

For my part I pity the woman who hasn't got any babies to win back the smiles to the stern faces of the lords of creation.—*Prairie Farmer.*

BENEFITS OF RELAXATION IN THE EDUCATION OF CHILDREN.—Sir Benjamin Brodie thus expresses his opinion on this subject:—"It is only to a limited extent that the education of children can be advantageously combined with bodily labor. Even in the case of grown-up persons, some intervals of leisure are necessary to keep the mind in a healthful and vigorous state. It is when thus relieved from the state of tension belonging to actual study that boys and girls, as well as men and women, acquire the habit of thought and reflection, and of forming their own conclusions, independently of what they are taught and the authority of others. In younger persons, it is not the mind only that suffers from too large a demand being made on it for the purposes of study. Relaxation and cheerful occupation are essential to the proper development of the corporal structure and faculties; and the want of them operates like an unwholesome atmosphere, or defective nourishment, in producing the lasting evils of defective health and a stunted growth, with all the secondary evils to which they lead."

CATTLE MARKETS FOR OCTOBER.

The following is a summary of the reports for the five weeks ending October 23, 1862:

NUMBER AT MARKET.

	Cattle.	Sheep and Lambs.	Shotes and Pigs.	Lire Fat Hogs.
September 25.....	3353	6960	600	—
October 2.....	2309	8557	450	2000
" 9.....	2706	8255	400	2500
" 16.....	2392	6726	400	2600
" 23.....	3466	7730	250	500
	15,231	38,228	2100	7000

The following table shows the number of cattle and sheep from the several States, for the last five weeks:

	Cattle.	Sheep.
Maine.....	3078	5549
New Hampshire.....	1946	2551
Vermont.....	5655	14832
Massachusetts.....	365	72
Northern New York.....	897	2303
Canada.....	326	11498
Western States.....	2964	1118
	15,231	38,228

PRICES.

	Sept. 25.	Oct. 2.	Oct. 9.	Oct. 16.	Oct. 23.
Beef, & lb.....	3½ @ 3½	3½ @ 3½	3½ @ 3½	3½ @ 3½	3½ @ 3½
Sheep and lambs.....	\$2½ @ 3½	\$2½ @ 3½	\$2½ @ 3½	\$2½ @ 4	\$2½ @ 4½
Wine, stores, while.....	3 @ 4	3 @ 4	3½ @ 4	- @ 4	4½ @ 5½
" " retail.....	4 @ 5	3½ @ 5½	3½ @ 5	4 @ 5½	5 @ 6
Dressed hogs.....	4 @ 4½	4 @ 4½	4½ @ 4½	4½ @ 4½	4½ @ 4½

REMARKS.—The number of Western cattle at market this month is smaller in proportion to the Northern, than it was in September, and the average quality decidedly inferior. One week something like 200 might have been selected out of the 600 at market, whose live weight would not have exceeded 900 lbs. each. October 9th, Mr. A. N. Monroe sold 42 such cattle, averaging 814 lbs., 40 ¢ cent. shrink. There have been, however, some lots of choice, corn-fed Western bullocks at market every week, which have sold about 25c ¢ 100 lbs. higher than the best Northern oxen. Occasionally a really extra pair of stall-fed Northern oxen have found their way to market this month. In the report of Thursday, Oct. 23, a pair was noticed as follows:

BOUNTERS.—Mr. Berry Long had 1 pair of oxen on sale at Cambridge, which, although not offered as workers, did nevertheless draw, pretty much all day, a large crowd of men and boys. Several experienced dealers laid the live weight of these "steers" at 6000 lbs., or three tons, which the owner said was a little too high, as they weighed at home only 5960 lbs. Mr. S. S. Learned drove off these cattle, with the promise of further particulars hereafter.

These oxen were not extravagantly fat or over-grown, but were well-formed, active, and apparently in a thriving condition.

The number of Northern and Eastern oxen at market, October 23, was very large and the average quality uncommonly good. As there were less than 400 cattle from the West, the trade was quite brisk. Some of the market men said that more stock changed hands on Tuesday of that week than on any other day during the past two years.

Notwithstanding the large number of cattle and sheep which have been offered for sale during the month, it is evident that prices are higher at its close than at its commencement.

Hides are now quoted at 7 ¢ 7½ ¢ lb.; tallow 7½ ¢ 8 ¢; and sheep's pelts at \$1.50.

Working oxen were quoted in report for October 23, as follows: 6 ft. oxen \$50 @ 75; 6 ft. 6 in. \$60 @ 85; 7 ft. \$90 @ 110. Extra somewhat higher.

Milch cows which are really good sell readily at good prices, while poor ones, being by far the largest class, sell low and hard at any price. Sales from \$20 to \$50—many cows with young calves are sold at about \$30.

The trade at the swine market is also improving, although the number of stores reported is small.

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SIMON BROWN, EDITOR.
HENRY F. FRENCH, ASSOCIATE EDITOR.

SUGGESTED BY DECEMBER.

"Now, all amid the rigors of the year,
In the wild depth of winter, while without
The ceaseless winds blow ice, be my retreat
Between the growing forest and the shore,
Beat by the boundless multitude of waves ;
A rural, sheltered, solitary scene,
Where ruddy fire and beaming tapers join
To cheer the gloom. There, studious, let me sit,
Sages of ancient time, as gods revered,
As gods beneficent, who blessed mankind
With arts and arms, and humanized a world."

Thomson's Seasons.



HE last breath
of the Old
Year has de-
parted, and
the new one,
with its icy
brow and chil-
ling storms,
commenced.—
We can do
but little out
of doors with
advantage at
this season,
but we can

accomplish much within. While, in a great measure, the winter, with icy hands, excludes us from communion with our fellow men, it, at the same time, opens to us the treasury of literature and science, and the advantages of retrospection and self-communion. Well may the farmer, imbued with a thankful and hopeful spirit, exclaim, with the poet :

The work is done, the end is near,
Beat heart to flute and tabor,
For beauty, wedded to the year,
Completes herself from labor ;

* * *

There is a hush of joy and love,
Now giving hands have crowned us—
There is a heaven up above—
There is a heaven around us."

The earth is frozen ; the implements of husbandry have gone into winter quarters ; the herds and flocks—the trees, the shrubs, the grasses—are all hybernating. We have reached another stage, attained another segment in the round of life, and enriched by the fruits of our previous toils, we can contentedly and quietly rest from our labors. We can now

—"Gather round the evening fire
And crack the jokes that never tire."

The best period of rest in the circle of the wide year is now at hand. The business of cultivating the earth and securing the crops,—the appropriate employment of the husbandman—is completed. He has passed through the busy and laborious cares of seed-time and tillage, the "joys of the early and later harvests," and has, in the spirit of true thankfulness and the cheering songs of "Harvest Home," welcomed the last of his crops to his cellars and his barns. The last of the flowers have faded—the frosts have turned field and forest to a russet brown, and the leaves that during the kaleidoscopic changes of maturer autumn, put on such gorgeous coloring, are now changed to a sad and sombre hue, and scattered over the icy ground. The roseate hues of summer no longer brighten the skies, which look chill and wintry, and even the few clear days that are occasionally interspersed through the solar chain of diurnal changes, are succeeded by cloud and storm. Nature bids us pause and look back over the vanished year. The paling stars, the purpling dawn and the rising sun usher in his morning, and the splendid coloring of the evening heavens, with their ever new and changing features of illuminated clouds, are his for a perpetual possession. He is daily in the school of Nature—of the Great Architect whose silent teaching, more effectually than those of the Garden, the Porch or the Academy—of sage or sophist, open up to his vision the pathways of knowledge, and of the mysterious love whose essence is divinest love.

The farmer, of all men, has the best opportunity to cultivate his taste. He may not, indeed, have access to the studios of the painter and sculptor, or the privilege of gazing upon the august creations—the breathing wonders of genius on canvas or in marble; but he has the privilege of studying the forms fresh from the hand of a Master infinitely greater than any that have graced the earth, and whose inimitable and unapproachable productions meet him at every turn. In comparison with these, what are the treasures of the richest collections and galleries of art? There may be no Apollos, no Psyches, no Venuses, no nude embodiments of ideal beauty and loveliness, to excite unholy passions—no exaggerated representations of heroism, to arouse sympathies which should never find place in the human breast; but he may gaze on forms and developments which have a refining and elevating influence upon his mind and affections, and from which he may derive instruction that, if taken in the proper spirit, cannot fail to make him both

—“a wiser and a better man.”

If he is a cultivated man, this is of infinitely more importance than the mere mechanical drudgery of the farm, the cultivation of acres, which, at best, produce but a perishable product. The food of the spirit—the material which is, “like the banquetting of the gods,” capable of sustaining a divine nature, has not simply an earthly origin; it assimilates to itself principles of a purer and diviner nature than can be developed by simple processes of germination and physical accretion.

How true it is, in the language of the poet, that—

“Lulled in the countless chambers of the brain,
Our thoughts are linked by many a hidden chain:
Awake but one, and lo! what myriads rise!
Each stamps its image as the other flies!”

The works of nature, like the works of immortal mind, are eminently suggestive. When we strike the chain of harmony in one of its links, it vibrates through its whole extent. Within the narrow limits of a hand's breadth, there is accumulated the material for a history which would supply a study for life.

“All over does this outer world
An inner world unfold,
And we can hear its voices ring,
Over its pales of gold.”

SINGULAR FACTS IN HUMAN LIFE.

The average length of human life is about 28 years. One-quarter die previous to the age of 7; one-half before reaching 17. Only one of every 1000 persons reaches 100 years. Only six of every 100 reaches the age of 65, and not more than one in 500 lives to 80 years of age. Of the whole population on the globe, it is estimated that 90,000 die every day; about 3,700 every hour, and 60

every minute, or 1 every second. These losses are more than counterbalanced by the number of births. The married are longer lived than the single. The average duration of life in all civilized countries is greater now than any anterior period. Macaulay, the distinguished historian, states that in the year 1685—not an unhealthy year—the deaths in England were as one to 20, but in 1850 one in 40. Dupui, a well-known French writer, states that the average duration of life in France from 1776 to 1843 increased 52 days annually. The rate of mortality in 1781 was one in 29, but in 1850 one in 40. The rich men live, on an average 42 years, but the poor only 30 years.—*Free Nation.*

ESQUIMAUX ARCHITECTURE.

As the days lengthen, the villages are emptied of their inhabitants, who move seaward on the ice to the seal-hunt. Then comes into use a marvelous system of architecture, unknown among the rest of the American nations. The fine, pure snow has by that time acquired, under the action of strong winds and hard frosts, sufficient coherence to form an admirable light building material, with which the Esquimaux master-mason erects most comfortable dome-shaped houses. A circle is first traced on the smooth surface of the snow, and the slabs for raising the walls are cut from within, so as to clear a space down to the ice, which is to form the floor of the dwelling, and whose evenness was previously ascertained by probing. The slabs requisite to complete the dome, after the interior of the circle is exhausted, are cut from some neighboring spot. Each slab is neatly fitted to its place by running a flenching knife along the joint, when it instantly freezes to the wall, the cold atmosphere forming a most excellent cement. Crevices are plugged up, and seams accurately closed by throwing a few shovelfuls of loose snow over the fabric. Two men generally work together in raising a house, and the one who is stationed within, cuts a low door, and creeps out when his task is over.

The walls being only three or four inches thick, are sufficiently translucent to admit a very agreeable light, which serves for ordinary domestic purposes; but if more be required, a window is cut, and the aperture fitted with a piece of transparent ice. The proper thickness of the walls is of some importance. A few inches excludes the wind, yet keeps down the temperature so as to prevent dripping from the interior. The furniture—such as seats, tables, and sleeping-places—is also formed of snow; and a covering of folded reindeer skin or seal-skin renders them comfortable to the inmates. By means of ante-chambers and porches, in form of long, low galleries, with their openings turned to leeward, warmth is insured in the interior; and social intercourse is promoted by building the houses contiguously, and cutting doors of communication between them, or by erecting covered passages. Store-houses, kitchens, and other accessory buildings, may be constructed in the same manner, and a degree of convenience gained which would be attempted in vain with a less plastic material. These houses are durable; the wind has little effect on them, and they resist the thaw till the sun acquires very considerable power.—*Sir John Richardson.*

For the New England Farmer.

TOMATO, SQUASH, CURRANT, GRAPE VINE AND MANURE.

If we ask of the mechanic who has a small lot of land with his buildings, why he buys his vegetables, the answer usually is, I have no land or time to spare. Such replies I rarely find true. They do not intend to speak falsely, but the small plats escape their notice. I raise my tomatoes on a piece 7×10 feet. I set out 15 plants; each hill was trailed, and the result was that I had enough for my family. On the side of my outhouse and top of the division fence, I lead the squash vines, and on the shady side find a place for the currant bushes. Some other by-place finds the rhubarb roots. The grape vine roams over the side of my dwelling. The plat under the clothes-dryer need not want for cultivation even. Here a fine bed of beets might grow luxuriantly, nor need a few pole beans take much space.

Most farmers find too much spare time after finishing haying. One day among the crops in eradicating the weeds, saves three days' labor in the month of June hoeing. No time can be found better for attending to the manure pile. If all the long manure is collected, mixed with muck, and shovelled over two or three times in the warm months, it will be better prepared for the next years' growth of vegetables, than it can be prepared in the spring. The plant will not take hold of its stimulants unless it is in the right state. Therefore, it is better to have it ready to be acted upon when the seed is put in contact with it. If every one labelled all the seeds, many mistakes might be avoided. Also, if he took pains to gather the seeds from those species designated as females, he would not find so many that do not germinate. The lice which infest apple trees do not like to be treated to a sprinkling of ashes in a wet day, I guess, for they generally leave.

S. P. M.

Cape Elizabeth, Oct., 1862.

For the New England Farmer.

BETHEL, MAINE.

MR. EDITOR:—I propose in a brief manner to furnish you a few of the most important facts which serve to make this village one of the most delightful in New England. It is surrounded on all sides by mountains pointing far toward the skies, which, clothed as they are in magnificent autumn foliage, with its changing hues, present many scenes most pleasant to behold. The limpid waters of the noble Androscoggin flow gently through the valley, near the centre of the town, on their way to the ocean.

The intervals, cultivated highly and yielding a abundant produce, show clearly the industry of the husbandmen, and seem to bring them a munificent reward. Your instructive paper finds its way to many of their homes, and perhaps this may account for their success in part.

Bethel has not been backward in furnishing brave men to represent it in the impending struggle, as more than one hundred and fifty have voluntarily gone forth, and strong, sturdy men as ever breathed the mountain air, now are ready if needed. A noble young officer, Harlan P. Brown, a citizen of this place, fell at the battle of Antietam, and his remains have been brought

home and interred. Sadness seems to be cast over the whole community in consequence. Educated, refined, beloved by all who knew him, under a sense of duty he went forth; nobly he did his duty, and fell bravely on the altar of his country.

The Grand Trunk Railroad runs through the village, and has a station here, making public intercourse easy and direct. A good hotel is kept here, (what many villages have not,) William F. Loopy, proprietor. Situated in a retired and most pleasant part of the village, is the Highland Boarding School, N. T. True, A. M., principal and proprietor. This institution is an honor to the State. Here the intellectual and moral, as well as the physical wants of the students are attended to, and a pleasant home is found for all who come under its charge.

AMICUS.

Bethel, Me., Oct., 1862.

For the New England Farmer.

THE BIRDS OF NEW ENGLAND---No. 23.

FINCHES.

Shore Lark—Pine Grosbeak or Bullfinch—Purple Finch.

The sub-order CONIROSTRES, or the *Cone-billed Birds*, is characterized by the generally more or less conic form of the bill, and is regarded as the "typical tribe of the perching order." It embraces many extensive families and sub-families, as the *Larks*, *Grosbeaks*, *Tanagers*, *Finches*, *Orioles*, *Starlings*, *Crows*, &c.

Of the LARKS proper (*Alaudidae*), we have but one species; of the others, so called, one is a Starling, (the Meadow Lark,) and the other a Warbler, (the Brown Lark.)

The SHORE LARK or SKY LARK (*Eremophila cornuta*, Boie; *Aldaia cornuta*, Wilson,) "inhabits everywhere on the prairies and desert plains of North America," and according to Prof. Baird, embraces two varieties. The "northern and eastern" variety inhabits the fur countries in summer, breeding in Labrador, and descends into the Atlantic States in winter; the "southern and western" variety inhabits the Western prairies and high central plains, breeding as far south as Wisconsin, and passing in winter as far southward as Texas. The Shore Lark comes to us from the north in October, spends a few weeks with us, and passes to the southward to winter, being abundant, it is said, in New Jersey at that season, and is seen as far south as Georgia. A few are sometimes observed in New England throughout the winter. They are often seen at Springfield, in this State, in October and in spring. About the middle of March they depart for the north, and early in May are seen at Hudson's Bay. While here these hardy birds frequent open plains, old fields and the dry shores and banks of bays and streams, keeping constantly on the ground and in small parties, roosting together closely by a sheltering weed or tuft of grass, on the dry and gravelly ground, abiding the frost and storm with hardy indifference.

Audubon says the Shore Lark breeds on the high and desolate tracts of Labrador, near the sea, where he found its nest. It is placed with great care in the mosses and lichens that cover the dark granite, embedded to its edge in the thick moss.

It is composed of fine grasses, forming a bed about two inches thick, and lined with the feathers of birds. The eggs are deposited early in July, which are four or five in number, "large, grayish and covered with numerous pale blue and brown spots." Like the Sky Lark of Europe, the Shore Lark sings as it mounts in the air, and is said to be quite musical, and its call note is mellow and pleasing.

This beautiful species measures about seven inches in length, and about twelve in alar extent. Above, pinkish brown, streaked on the back with black; a fan-shaped spot of black on the breast, and spot of black beneath the eye; sides streaked with pale reddish brown; belly and vent, white; tail forked, black, the exterior feathers marked with white. Two erectable tufts of feathers on the head hence its name of Horned Lark.

The extensive family *Fringillidæ*, as commonly established by naturalists, contains those birds known as *Finches*, *Sparrows*, *Buntings*, *Linnet*s, *Grosbeaks*, &c., &c., and embraces many familiar and well-known species. Following Prof. Baird's arrangement in this family, we have the sub-families *Coccothraustineæ*, *Spizellineæ*, *Passerellineæ*, and *Spizineæ*. The sub-family *Coccothraustineæ* embraces the *Bullfinches*, *Purple Finches*, *Goldfinches*, *Linnet*s and *Snow Buntings*, the most of which are more or less brightly colored species, and are generally quite boreal in their habitat, migrating southward only in the severity of winter.

The PINE GROSBEEK, or PINE BULLFINCH of some writers, (*Pinicola Canadensis*, Cabanis,) inhabits the Arctic regions of America, and descends into the United States only in severe winters, and is consequently a casual and irregular visitant in New England, though sometimes found as far south as Philadelphia. The present, or a very closely allied species, (*P. enucleator*,) inhabits the extreme northern region of the eastern continent, migrating southward in winter; in all countries it is considered rare.

In March, of 1860, a considerable party of these Bullfinches visited Springfield, spending a week or ten days in the vicinity, feeding unsuspiciously in yards where the houses were standing thickly; many specimens were taken by collectors, including two pairs taken alive by my friend, Dr. HORSFORD, who is quite a practical ornithologist, and ever alert for rare specimens. They very readily became reconciled to confinement, and as the warm weather advanced the mellow warble of the males was often continued through the greater part of the night. The last one was living until quite recently, if not still alive in New York, where it was highly prized as a song bird. The following interesting note from the doctor to myself, relates an incident that occurred nearly a year after their capture:

"As I was sitting by the window to-day," he says, "contemplating the mild and inoffensive habits of my Arctic Bullfinches, and the delight they expressed when I placed a mass of snow and ice in their cage, they suddenly and with a scream, dashed from side to side against the cage, every crest erect, and every beak open. On looking up I was surprised to see a Northern Shrike or Butcher Bird clinging to the sash near my head, which he instantly left for a tree near by. The Shrike, from the neighboring trees, had discovered his boreal neighbors, and making a dash at them, had

brought up against the window, while the Bullfinches, not yet having forgotten their old and mortal enemy, the Shrike, were thrown into a state of terror and desperation. For full ten minutes they remained in the attitude of defence, the feathers of the crest and neck erect, and the beaks open, expecting the return of the Shrike. Afterwards, by way of experiment, a stuffed bird of their own species being brought to the cage was greeted with a friendly note of recognition, while a stuffed Shrike was met with a scream of terror."

The Pine Bullfinch, says Richardson, leads a quiet, retired life in the gloomiest recesses of the pine forests of the higher latitudes, feeding upon the seeds of the pine and spruce, and the buds of northern trees and shrubs. Their nest is said to be placed in their favorite evergreens, at no great height from the ground, composed of twigs externally, and lined with feathers. The eggs, four or five in number, are white.

Length, about nine inches; extent, fourteen. Adult male tinged with reddish orange, quite bright on the head, neck and rump; feathers of the back centred with black; two bands of white on the wings; tail forked. Individuals vary in color according to sex and age. After moulting in confinement they lose their brilliant colors, like the Purple Finch.

Of the four species of Purple Finch, (genus *Carpodacus*,) said to inhabit the United States, we find but one in New England, the remaining three being more western in their habitat.

The common PURPLE FINCH, (*Carpodacus purpureus*, Gray,) is well known here as a cage bird, and highly prized for its excellent powers of song. It is widely distributed over the continent, many going to the northward in summer to breed, spending the winter generally in the Southern States. It is not very common here, and in the summer, in many parts of the States, it is very rare. It comes here from the South early in April, and retires southward again about the first of October. The song of this bird is remarkably clear and mellow, somewhat resembling the beautiful song of the Warbling Vireo, but is louder and more varied. "At times," as Nuttall observes, "the warble is scarcely audible, and appears as at a distance; it then, by a fine crescendo, bursts into loudness, and falls into an ecstasy of ardent and overpowering expression; at such times the usual pauses of the song are forgotten, and like the varied lay of the Nightingale, the ravishing performer, as if in serious emulation, seems to study every art to produce the effect of brilliant and well-contrasted harmony."

In spring, they feed much upon the buds of fruit trees, at the time they are just bursting into leaves and blossoms, particularly those of the apple tree, of which they are extremely fond; but the species is not numerous enough to cause serious harm from this habit. In the fall, they are more numerous than at other seasons, when those that have spent the summer northward are returning, frequenting the garden and feeding upon the seeds of various weeds, remaining till October.

It commonly nests in low trees, laying three or four eggs of a bright green color, with black spots, in a nest composed with no great care of dry grass and rootlets.

The Purple Finch, or Linnet, by which name it is commonly known as a cage bird, is about six

inches in length, and nine and a half in alar extent. Color crimson, deepest on the head and chin; back streaked with dusky; wings and tail dusky tinged with red. The female and young, until the third year, are olive brown streaked with dusky. The young males sing while in this pale brown dress, from which some have inferred that the females sing as well as the males. The brown colored birds are much the most numerous at all seasons, and I think undoubtedly breed in their immature plumage. J. A. A.

Cambridge, Mass., Oct., 1862.

PUMPKINS AND APPLES FOR CATTLE.

There has much been said in regard to the value of pumpkins as food for stock. Some write in their favor while others do not see any value in them; some saying the seeds must be taken out or they are an injury to cattle; others do not discover any harm in feeding them with the seeds. I have been amused to hear farmers who have devoted years to their calling, say that pumpkins dry up their cows; also, that apples do the same if given to them; and that they are not worth gathering for that purpose.

For the purpose of ascertaining the value of pumpkins for feeding purposes, I had one yoke of oxen (7 years old,) weighed about the 1st of October; also a pair of stags 3 years old, (that had just been castrated,) and a yearling steer, fed with them, as they were taken from the field, (that is ripe or green as they might be,) but as the fall was fine they were mostly ripe ones, and were nearly all gathered and housed before any frost, which I think should always be done to get the value of them. The oxen were unruly, and were fed about two bushels each per day, and then run loose in a large stable, and eat from a mow of wheat, that was partitioned off from one side of the stable and filled when I threshed my wheat, and so fixed that they would get what they would eat without wasting. The stags were also kept in the stable, but fed hay and cornstalks, with $1\frac{1}{2}$ bushels per day, and the steer had half a bushel per day and run in the pasture, except he was brought to the stable for his feed.

The result: The oxen gained 300 pounds, one stag 100 pounds, the other 120 pounds, and the steer about 100 pounds, which I think was as cheaply done as could be with meal or any other feed. The stags I have no doubt would have done much better, but they were not well when the experiment commenced, as they were put in the stable and commenced their feeding immediately after castration; they were fed without any regard to seeds, some being taken out of the best ones for seed, the rest fed as they were. Having plenty of pumpkins, some were given to two farrow cows, and they nearly doubled their milk in the months of November and December, till they were all fed out.

This year apples were too scarce to feed, but I think from some experiments I have made, that they are at least equal to carrots in weight for feeding to neat stock, and especially to milch cows, they always gaining both in milk and flesh with me, when fed on them. Apples and pumpkins should not be suffered to freeze, as that injures their feeding properties very much.—JONA. TALCOTT, in *Country Gentleman*.

For the New England Farmer.

MANURE, MUCK, DRAINING, &c.

Not many years has it been my lot to live, but in those few years I have given some attention to agriculture. I find that the first thing in farming is to have a good supply of manure. Now, the question comes up, how shall the supply be obtained? One answers, haul muck into the yard, and yard the cattle upon it. My experience with muck is this,—as an absorbent and to protect the droppings of stock from the sun's rays by mixture with it, it is first-rate; but for a farmer to cart more than that quantity, is useless. Great value is placed on land inclined to muck, by many, and they clear it up at great expense, but I have yet to learn of its superiority over other good soils. It looks to me that a soil washed from neighboring hills submitted to a leach of time unrecorded, is not equal to the virgin soil, which has in a measure been protected from the storms of time by the forest, and enriched by the productions of that forest.

On every farm there is vegetation, if properly cared for, which is the farmer's mine. It can be converted into a stimulant for the production of other crops. When we see a tiller of the soil who looks well to his manure heaps, we may be sure that his cellars, barns and granaries are well filled; that his buildings are properly cared for, that his stock is in a thriving condition, and that his purse is not empty.

Judge French, who has done more with his pen than any other man in New England to incite farmers to the benefits of underdraining, errs, in my opinion, relative to the superiority of tile over stone for under drains. I think that tile are more liable to be choked than stone. I have seen the latter, which have been used for years, seemingly as free as the day when laid; but I may err. Farmers on almost all farms have stone which would be a benefit to remove, and of course, if in the process of removal they are transferred to the place to be drained, without much extra cost, then he has the material to build without buying. To procure tile within himself he must go to the expense of manufacturing, which only a few farmers have the convenience to do. I have yet to learn that there are many cases where one can lay tile drains cheaper than stone, if the farmer has stone upon his estate. S. P. N.

Cape Elizabeth, Oct., 1862.

GOD GOVERNS BARNS.—A wealthy capitalist, who had made the most of his own fortune, and what was harder, taken care of it, gives the following as the secret of his success: "Honor the Lord with thy substance, and with the first-fruits of all thine increase; so shall thy barns be filled with plenty, and thy presses burst forth with new wine." The philosophy of the matter is simply this, *God governs barns*. We are willing to allow that he governs nations, and guides parliaments, and directs battle-fields. But Solomon, moreover, knew that he presides over wheat-fields, stables, and wine-presses. We acknowledge that God is to be worshipped in churches with prayers and psalms; but Solomon will have it that he is to be praised also with thrashing implements and grain wagons. Reader, do you act as if you agree with him?

For the New England Farmer.

TO THE YOUNG MEN

Who read the *New England Farmer*, and all others whom I wish to do so. In the first place, you will please examine the paper, quality of type and general aspect, and then the character which goes to make up its contents. Take the present number as a specimen—and now, if you choose, compare it with any other paper in New England devoted to the same class of interests, and then decide whether it is not the best of any of them, and for your interest to subscribe for it. Let this be your first duty.

Then there are other duties which I wish to call the attention of our young men to, which we must perform in this life, if we would be useful and a man. How is it with you, young reader,—have you settled the point whether you will be a *man*? If you have firmly settled this point in your character, then one-half the work is done; all things else come almost as a matter of consequence. Very few young men in this country can depend upon family or friend, and none who are in health will, for what is necessary in this life, to make up a noble manhood. There may be those who are called men, who have but to ask and they receive. I have nothing to do with such; they are the blanks in human society, to all intents and purposes, but I mean the thousands of young, clear-headed, strong, healthy men, scattered all over New England, who have got their character and fortune to make in life; their social and cash-standing among their fellow-men. To these I address myself. Having settled the point that you will be a man, such as God approves and mankind acknowledge as such, the next thing is, how you shall accomplish your purpose. Decide upon some pursuit, no matter what, if it be honest, and then follow it—stick to it—stick, stick, stick. Thousands fail here. Let nothing turn you from it; if you fail once, twice, yea seven times, do not give up, but still *stick* to it, and in the end success is just as certain to come as God spares your life and time moves on! I speak from observation which has been somewhat extensive, and experience, now at the age of forty-four. Thousands of young men have proved nearly worthless to the world, from not attending to these suggestions; because, perhaps, at their start in life, a few failures and disappointments came, they became discouraged and gave up. I tell you, my young friend, there is no *man* here, not a particle of the genuine article such as I mean. If there had been, instead of giving up and ever after passing a useless life, these failures and disappointments would only have stimulated them to review the ground where they stood, and passed over, and with redoubled energy the blows would have been laid on heavier and more rapid, and success compelled to come and lay its trophies at their feet. She will not come, however, by giving up—only “be *sure* you are right, then go ahead.” Never look back unless to gain strength to push more constantly, steadily forward, and the end sought for will come. Is there any exception to this law?

Suppose you decide on being a farmer, and agriculture is the most noble of all human employments, you have nothing to begin with but your manhood, and strong arms. I would say to you, do not be in too great haste to have a *large*

farm; a few acres paid for will bring more profit than a large number and a heavy debt to carry. Still, I am one of those who believe there is profit in farming—that the right man, in the right place, can run in debt for his farm, stock and tools, maintain his family, pay for his farm and take the paper besides. It has been done often; I know of those now doing it, but so far as I am capable of observing, it is not the best course to follow by the majority. There is more in the *man*, than any defect or fault in the business. I may safely say this—get your money first, and the farm comes as a matter of course. To do this you need not abandon farming—on the contrary, while getting the money you will be learning valuable lessons for future profit.

N. Q. T.

King Oak Hill, 1862.

WHAT A VOLCANO CAN DO.

Cotopaxi, in 1738, threw its fiery rockets 3,000 feet above its crater, while in 1744 the blazing mass struggling for an outlet, roared so that its awful voice was heard a distance of more than 600 miles. In 1797 the crater of Tunguragua, one of the great peaks of the Andes, flung out torrents of mud, which dammed up rivers, opened new lakes, and in a valley of a thousand feet wide made deposits six hundred feet deep. The stream from Vesuvius which, in 1737, passed through Torre del Greco, contained 33,600,000 cubic feet of solid matter, and in 1794, when Torre del Greco was destroyed a second time, the mass of lava amounted to 45,000,000 cubic feet. In 1679 Etna poured around a flood which covered 84 square miles of surface, and measured nearly 100,000,000 cubic feet. On this occasion the sand and scoræ formed Monte Rossi, near Nicolosi, a cone two miles in circumference and 4,000 feet high. The stream thrown out by Etna, in 1810, was in motion at the rate of a yard per day, for nine months after the eruption; and it is on record that the lavas of the same mountain, after a terrible eruption, were not thoroughly cooled and consolidated ten years after the event. In the eruption of Vesuvius, A. D. 79, the scoræ and ashes vomited forth far exceeded the entire bulk of the mountain, while in 1660 Etna disgorged more than twenty times its own mass. Vesuvius has thrown its ashes as far as Constantinople, Syria, and Egypt; it hurled stones eight pounds in weight, to Pompeii, a distance of six miles, while similar masses were tossed up 2,000 feet above its summit. Cotopaxi has projected a block of 109 cubic yards in volume, a distance of nine miles, and Tomboro, in the island of Sumbawa, in 1815, during the most terrible eruption on record, sent its ashes as far as Java, a distance of 340 miles. In the district of Tomboro, alone, out of a population of 12,000 souls, only twenty-six escaped.—*Recreative Science.*

GIGANTIC PITCHER PLANTS, (*Nepenthes, vari-ous species.*)—In “Life in the Forests of the Far East,” a new work on Borneo, by Spencer St. John, we learn that Kina Balu abounds in many species of those curious plants, more than twenty species having been collected by Mr. Hugh Low, son of Mr. H. Low, of the Clapton nurseries, who has now been long attached to the establishment of Sir James Brooke, the Rajah of Sarawak. One

of these is thus described by Mr. St. John: "The morning, while the men were cooking their rice, as we sat before the tent enjoying our chocolate, observing one of our followers carrying water in a splendid specimen of *Nepenthes Rajah*, we desired him to bring it to us, and found that it held exactly four pint bottles. It was nineteen inches in circumference. We afterwards saw others apparently much larger; and Mr. Low, while wandering in search of flowers, came upon one in which was a drowned rat."—*Scottish Farmer*.

CARE OF ANIMALS IN NOVEMBER.

One of the most dreary aspects of life in the country is that of animals roaming over barren pastures and exhausted fields, in the month of November. They are turned out from the shelter of the barn-yard, after a stinted breakfast of dry husks, to wander through the gusty day where there is nothing to eat, and where the sharp north wind is blowing away the very heat and moisture which animate their empty bodies! Under such treatment their hair soon looks long and frowzy, their ears flop about as though hung on a single pinion, their eyes lose lustre, and the countenance is dejected, while they stand in the blast with all their feet so close as almost to touch each other.

This is the poorest possible beginning for a stock of cattle as cold weather approaches, and it will cost the farmer twice as much money to restore the fat and flesh which they lose under this treatment, as it would to add an equal amount if the cattle were properly cared for. Between the time of a plentiful supply of grass, and that of feeding upon dry fodder, is a trying period for stock,—one in which they require unusual care rather than neglect. They are deprived of their accustomed supply of green and succulent food, at a time when the cold weather is making unusual demands upon the animal heat of the system, and for this reason alone they should be fed with good hay, a little corn, pumpkins, and other heat and fat-making food. If to these are added the leaves of cabbage, mangolds, beets, carrots, or turnips, a small foddering at a time, two or three times in the day, they will lay on fat and flesh rapidly, and enter upon their winter course in excellent condition to grow or yield milk in abundance. On the other hand, cattle that go to their winter-quarters in a thin and shabby manner, cannot be brought up to a sleek and healthy condition short of extraordinary effort and cost. It is poor economy to neglect cattle in the month of November.

VARNISH AND WHITEWASH.—A very free flowing black varnish is made with 1 pint of Canada balsam, 4 of bitumen (Judea), and 4 of chloroform.

A thick wash composed of lime, some salt, a little molasses and some fine sand, applied to shingle roofs render them nearly fire-proof and far more durable.

SPREADING MANURE IN AUTUMN.

In your issue of Nov. 7, under the above heading, R. Goodman says "you startle New England farmers by the advice of Mr. Thomas to Cayuga county farmers, to spread their manure for spring planting, in the fall. It is the general supposition with us, and practiced upon, that by so doing, the best part of the manure will be washed away, but if put on just before planting, and then plowed and harrowed in, all the good of the manure will be retained; * * * and I do not know a farmer of my acquaintance in Massachusetts or Connecticut, who would not think it wasteful farming to spread manure in the fall on land to be plowed in the spring."

Mr. Goodman's article is followed by editorial remarks, which go to show very clearly that the loss, if any, can be but trifling, and gives two reasons why autumn manuring is better than spring "1st, It accords with experience, and 2d, It agrees with theory."

It is to be presumed that a great majority of our farmers entertain the same *opinion* in this matter that Mr. G. has expressed. Whether this opinion is correct or not, is practically a matter of great consequence in the aggregate to the farming community. I believe Mr. Thomas is correct in his "advice to Cayuga county farmers," and whatever course in this method of applying manure is profitable to the farmers of that county, will also be found equally so to the farmers of other counties and States.

It is but about a dozen years since the quality of clayey and loamy soils for combining with, and retaining the fertilizing ingredients of manures, has been thoroughly investigated and rightly understood, even by the scientific.

Prof. Liebig, in his "Modern Agriculture," says "There is not to be found in chemistry a more wonderful phenomenon, one which more confounds all human wisdom, than is presented by the soil of a garden or field.

"By the simplest experiment, any one may satisfy himself that rain water filtered through field or garden soil, does not dissolve out a trace of *potash*, *silicic acid*, *ammonia*, or phosphoric acid. The soil does not give up to the water one particle of the food of plants which it contains. The most continuous rains cannot remove from the field, except mechanically, any of the essential constituents of its fertility.

"The soil not only retains firmly all the food of plants which is actually in it, but its power to preserve all that may be useful to them extends much further. If rain, or other water holding in solution *ammonia*, *potash*, *phosphoric* and *silicic acids*, be brought in contact with soil, these substances disappear almost immediately from the solution; the soil withdraws them from the water. Only such substances are *completely* withdrawn by the soil as are *indispensable* articles of food for plants; all others remain wholly or in part in solution."

"It must be so," Liebig, "thou reasonest well," else the millions of acres of fertile prairie land would have been as barren as the sands of Cape Cod. And the fertility of the alluvial soil bordering on the Nile, would have had its fertility *leached* out by the annual overflowing of that river, thousands of years before the sons of Jacob went to Egypt to purchase corn, and that, accord-

ing to Biblical chronology, was 3,568 years ago. There has been an annual overflowing of the same land ever since, and yet these 3,500 and odd freshets have not lessened the fertility of the soil—they are as productive now as in the time of the Pharaohs.

Thousands of our swamps have been saturated with water most of the time “ever since the flood,”—yet drain them, throw up the muck, sow oats or grass seed, and such is the fertility of these water-soaked soils, that they will yield as heavy crops as can be grown by the use of farm-yard manure. The fertilizing ingredients of a rich alluvial soil, swamp muck, and stable or other animal manure, are identical—with this difference, these fertilizing ingredients in the manures can be mostly leached out, but not so in the soil. Now, if the farmer applies his farm manure to grass land in autumn, the rain and melting snows will leach out a large portion of the fertilizing constituents of the manures. These, before the spring plowing, will have mostly soaked into the soils, which seizes upon and retains them as a miser does his gold, and the soil will not part with them, only to growing crops and the crucible of the chemist.

Scores of facts and experiments might be cited to prove the correctness of Mr. Thomas's advice.

This power of absorption in soils was published by Prof. Way, in 1850, he having experimented largely, by filtering the foul water from the sewers of London, and fetid water in which flax had been steeped, putrid urine, &c. It was found that when three-fourths sand and one-fourth white clay, in powder, were placed in jars to the depth of six inches, the foul liquids came through the filter free from smell, and scarcely to be distinguished from ordinary water. But to make a short story of this matter, it was discovered that the clay or aluminous portions of soils possess the power of chemically combining with not only the gaseous compounds of decomposing animal matter, but also with the alkalies, ammonia, potash, soda, phosphates, magnesia, &c.

This, said Prof. Way, is a wonderful property of soil, and appears to be an express provision of nature. “A power is here found to reside in soils by virtue of which, not only is rain unable to wash out of them those soluble ingredients forming a necessary condition of vegetation; but even these compounds, when introduced artificially by manures, are laid hold of and fixed in the soil, to the absolute preclusion either by rain or evaporation.”

Mr. Charles Lawrence, an eminent English agriculturist, about that time stated in the *London Agricultural Gazette*, that autumnal manuring immediately followed and covered by the plow, is the most valuable discovery, perhaps, in its results, for which agriculture has been indebted to science. This statement was founded upon the then recently published experiments of Prof. Way, who, he says, “has clearly established the fact that the soil has the peculiar property of absorbing and appropriating all those elements of manure intermixed with it, which are essential to the growth of plants.”

Most of the farmers in this section plow their green sward in autumn, to be planted in the spring with corn. They cart out their manure in the fall, and place it in large heaps on or near the plowed field. In the spring re-load the manure, lay it out in heaps, spread and harrow in. It is no trifling

job to re-load an hundred loads of manure next spring, and cart it over the furrows, which are much more soft in the spring; besides, it is usually a busy season with farmers, and their teams are not then usually in as good working order as they are in the fall.

If the farmer has manure to draw out in autumn, and wishes to invert his green sod at that season of the year, it is my opinion the better way is to first plow, then cart on the manure, spread it and harrow in. If he does not wish to “break up” till spring, then cart and spread the manure on the grass lands intended for spring plowing. If the manure is intended for grain or corn stubble, then apply it in the fall, and plow in shallow.

If there is any reliance to be placed on the statements of Prof. Liebig and Way, and those of John Johnston and hundreds of other good practical farmers, there will no loss of manure arise from autumnal manuring—but much saving of money, for with the farmer—“time is money.”—LEVI BARTLETT, *Warner, N. H., in Country Gentleman.*

For the New England Farmer.

THE VINTAGE.

“My well beloved hath a vineyard in a very fruitful hill.”—ISAIAH 5: 1.

’Tis the time of the vintage, and laden to fill
The harvesters come from the vineyard and hill;
They bear in their arms the rich fruits of the soil,
And sweetly are paid for their labor and toil.

With rich grapes of Eschol these vie in their size,
Each cluster in richness and bloom a fair prize,
The fine early Amber, so luscious and sweet,
The Concord and Sage from their trellises meet,

And gently repose in their beauty and bloom
With the Black Cluster, rich in hue and perfume.
The Delaware, tiny, transparent and sweet,
And fit for the fairies in smiles will you greet.

The Hartford Prolific in regal hues shine,
Less frail than their neighbor, the fair Muscadine.
All rich in their sweetness and delicate change,
The Orient vineyards you care not to range;

But fancy the vision is being fulfilled
When each shall the walls of Jerusalem build,
“And they shall plant vineyards and eat of the fruit,”
And peace, love and truth be their constant pursuit.

Harvard, October, 1862.

For the New England Farmer.

BOUNTY TO AGRICULTURAL SOCIETIES.

I perceive your correspondent from the county of Essex throws out the hint that the bounty of the State may be withdrawn from our agricultural societies hereafter, saying they can get along well enough without this bounty; having so managed their income as to establish a permanent fund, for the support of exhibitions; whereas some societies have expended all their income, and something more. There is nothing very extraordinary in this course of proceeding; it has been common in the world, ever since our Saviour's parable of those, a part of whom were wise, and a part were foolish—when those that were foolish, having wasted their funds, called upon the wise to contribute of their abundance. No, said the wise, we apprehended what was coming, and prepared for the emergency.

October 20, 1862.

ENCOURAGEMENT FOR HUSBANDMEN.

For many years there have not been so great inducements for farmers all over the country to put forth their best efforts to produce largely of horses, cattle, sheep, swine, and other stock, and grain and vegetables, as at present. The war in which the country is engaged, and which may, for anything that can now be seen to the contrary, continue for one, two or five years, has created an extra demand for horses, mules, beef, pork and wool, and taken from the farming districts many young men heretofore actively engaged in producing them.

The stock on hand of these products of the farm was very large when the rebellion broke out, and consequently prices have not as yet been very much increased in the Northern and Western States. The foreign demand for grain increases from year to year, and it will probably be a long while before Europe will be able to produce enough to feed its people. The United States will be looked to to feed the hungry poor of England, Ireland and Scotland.

Demand and supply always have and always will govern and regulate the price of the products of the earth. Speculation may step in and control for a time, but not long. The time has come when every thing produced by manual labor will command a remunerative price. Husbandry will be respected according to its importance to the other industrial interests of the country, and the profits derived therefrom.

The demand for horses for army and other purposes is such that the prices paid for them are from twenty-five to thirty-three per cent. higher than the same quality of horses sold for one year ago, and yet they are rising, and will continue to rise so long as the supply is inadequate to the demand. Farmers who give their attention to the raising of good horses, will find it a remunerative business for the next few years. Cattle for beef, work and milk, though not materially higher than one year ago, must advance considerably in price in the year to come, or we much mistake the signs of the times.

Those who have large stocks, or who have the means to produce them, will do well to double their efforts, with a certainty of realizing large profits. Wool, and especially the coarser grades, has not been so high for many years as now, and it is still rising. We have heard the opinion expressed by intelligent gentlemen, in whose judgment in such matters we place much confidence, that should cotton continue as high as now, wool, in fair lots, will bring from eighty cents to a dollar per pound within the coming year.

In these facts the farmer will not fail to see much to encourage him to greater exertion to put into the market the greatest possible amount of the products of his farm, of whatever kind, and wisdom would dictate to many who are engaged in other pursuits, the propriety of giving their best energies to the proper cultivation of the earth, with every assurance of a bountiful return.—*American Stock Journal*.

MULE SHOEING FOR THE GOVERNMENT.—In Washington, from 200 to 500 mules and horses are constantly waiting for their turn at the shambles. The *modus operandi* in shoeing govern-

ment mules is novel. The most of these mules, being very careful of their feet, will not allow them to be handled. Consequently a machine is built called the "stock." The mule is pounded into it, two straps put under his belly, then hoisted up, so that his feet will touch the beams below. In that situation each foot is fastened to the beam below by iron bands—the bands being tightly fastened between the hoof and joint above. After being made secure, he commences his frightful struggle, which lasts until he finds himself powerless, when four workmen approach him, one at each foot, and in five minutes he is "done, finished." There are two of these shops in that vicinity, shoeing about 1000 mules daily. In these shops thousands of men are employed by the government; and it is but a tithe of the immense amount of government mechanical labor that is employed in and about the city at the present time.

THE LINDEN TREE.

Few trees connected with rural economy are of more value than the Linden. In some countries, and especially in Russia, scarcely a village or hamlet can be found where it is not to be seen. The wood is valuable, and much sought after by cabinet-makers, by whom it is wrought into furniture of various descriptions. It also furnishes material for other artificers, particularly the turner and carver, by whose skill it is made to assume the form of a variety of domestic utensils. From the inner bark, cards and matting are manufactured. Its blossoms, which exhale a most aromatic perfume, are available to the bee-master as pasturage for his bees, and to the botanical practitioner as useful to the invalid.

The peculiar hue, fine aromatic odor, and exquisitely delicious flavor of the honey of Circassia, it is said, are derived from these blossoms. The small limbs and tender shoots, gathered with their foliage, and mixed with corn or other meal, are fed to stock during winter, and are reputed valuable.

There was one of these trees standing, some years since, in the upper Mall, in Boston. It was very ornamental, being, in every respect, a most noble and beautiful tree. Its propagation is attended with little difficulty, and it appears to accommodate itself with facility to almost every description of soil, from the heaviest and most ponderous clays, to the lightest and thinnest sands.

ASHES FOR SWINE.—A correspondent of the *American Stock Journal*, writing from "out in the West," thus briefly relates his experience:—"I have twenty swine running in a three-acre field without grass, with access to plenty of water, and fed well on corn. I gave them, for several weeks, two pails of ashes a week, and they ate them with a relish. Ashes are said to be a preventive of hog cholera, in proof of which is the testimony of Cassius M. Clay and numerous other residents of southern localities, acquainted with this disease."

RELATION OF FODDER TO MANURE.

The following article is by the Rev. John Wilson, author of the *Rural Cyclopaedia*. It contains some curious and certainly very interesting facts:

Fodder bears a direct and important relation to farm-yard manure as well as to the feeding of stock. The weight of the excrement of a sheep, or an ox, or a horse, bears a definite proportion to the weight and quality of his fodder; and the weight of the entire manure obtained may easily be either calculated or pre-determined by the allotment of litter, the selection of animals, and the duration of confinement within the house or yard. Let a man simply reckon how much allotted fodder an animal is allowed in the day, how much litter is laid down to him in the day, what proportion the weight of the fodder bears to the weight of the excrement, and what degree of decomposition is allowed to take place upon the litter and the excrement, or what proportion of loss is occasioned by gaseous dissipation, and he may know to almost the smallest fraction of a pound what quantity of manure will be realized. According to an average of experiments and observations made by Veit and Block, and published by the former, 1 pound of ordinary meadow hay yields $1\frac{1}{4}$ pound of manure from a sheep, $1\frac{1}{2}$ pound from a horse, and 2 pounds from an ox or cow; 1 pound of straw fodder yields 1.2 pound manure from a sheep, 1.4 pound from a horse, and 1.9 pound from an ox; 1 pound of green grass or green clover yields 0.37 pound of manure from a sheep, 0.4 pound from a horse, and 0.6 pound from an ox; 1 pound of potato tubers or of turnip bulbs yields $\frac{1}{2}$ pound of manure from a sheep, $\frac{1}{2}$ pound from a horse, and 0.7 pound from an ox; 1 pound of grain yields 1 pound of manure from a sheep, $1\frac{1}{2}$ pound from a horse, and 2 pounds from an ox; and 1 pound of straw litter yields 1.37 pound of manure with a sheep, 1.7 pound with a horse, and 2.2 pounds with an ox. "It is known," adds Veit, "that the dry fodder and the juicy, estimated according to hay value, with litter employed for the cattle, for manure in general, will give double the weight in moderately decomposed manure. For the production of 19,800 cwt. of manure, there are therefore necessary, of materials for the manufacture of manure, 9,900 cwt." He then shows that 50 morgens of potatoes, 20 of winter rape, 20 of winter wheat, 20 of winter rye, 40 of summer rye, 20 of barley, 20 of oats, 20 of peas, 10 of beet, 20 of red clover, 10 of lucern, 60 of thrice-mowed meadow, 117 of twice-mowed meadow, and 90 of once-mowed meadow, may, after deducting the loss of dung on the meadows, be computed to yield 12,147 cwt. of immediate fodder and litter produce, and 24,224 cwt. of manure. Professor Burger says, "The dry nutritious substance, or that which is reckoned by its dry weight, suffers in the bodies of beasts a considerable diminution by the loss of that which the absorbing vessels appropriate to themselves from it, and which with the excrements secretory of nutritious substances, are so easily decomposed by the process of putrid fermentation, that in a short time its substance as well as its weight is very considerably diminished. If we therefore say that 100 pounds of dry substance of consumed fodder, with a proportionate quantity of litter, gives 200 pounds of manure, this must be understood of stall-manure, where

the greatest amount of urine is mixed in part with solid excrements, or if they should be dissipated on the dunghill, would be replaced again by rain. The more raw, more recent, stall-manure is, the more the beasts drink, the more they take of juicy food, the greater is the proportion of the weight of stall-manure compared with the weight of the fodder eaten; wherefore there is more manure from horned cattle than from horses, and the least from sheep."

USE OF WASTE.

Our doctrines are—feed the earth and it will feed you—feed the apple-tree and it will yield fair fruit.

ASHES.—Take especial care of all the ashes made on your place. Don't permit them to be exposed to the weather, but keep them under cover. Five bushels of ashes, mixed with two double horse cart-loads of marsh river mud, muck, or peat, will convert the whole into good manure. A hogshcad or two of soap-suds would do the same thing—therefore, among your other savings, save and utilise them.

POULTRY DUNG.—Have this regularly swept up every Saturday, packed away in barrels, and sprinkled over with plaster. Dana, with force and truth, says: "The strongest of all manures is found in the droppings of the poultry yard." Next year each barrel of it will manure you half an acre of land. Save it, then, and add to the productive energies of your soil. Don't look upon it as too trifling a matter for your attention; but recollect that the globe itself is an aggregation of small matters.

URINE.—Save this: in every hundred pounds there is 72 per cent. of nitrogen in its humid state, 23.11 in its dry.

WOOLEN RAGS.—These are rich in the elements of manure. They contain, when dry, 20.26 per cent. of nitrogen, and should be used as manure. Dana says they should be nearly thirty-four times stronger than fresh cow-dung.

In a word, save everything in the shape of refuse or offal; it is all good to make the crops grow—all good to sustain vegetable life, and through its products to sustain animal life. Let your eyes, your mind, your heart and your hands, be intently directed to the accumulation and preservation of the materials to make manure. Follow our advice, and your lands will grow rich, and your pockets heavy.

ECONOMY OF FENCES.

The question of fencing is attracting considerable attention. It is thought in some quarters that our cultivated fields are too much cut up, and that the expense of fences might be diminished one-half. In many localities in this State the fences are built chiefly to get rid of the stone, and many a farm is weighed down with huge double wall which would be useful only in cases of invasion. In cold, bleak and windy situations, fences serve as a shelter, and are thus a benefit to the crop. On level farms, where machines can be used, the fewer fences the better; as to the stones, better put them under than above ground. There are very few farms that would not be benefited by the drainage effected by casting the stones regularly into ditches opened for the purpose each

year as it became necessary to haul them off. These of course are not equal to tile drains, but they serve two purposes, and are very useful. Probably half the stone fences on many farms had better be sunk in this way. We know of scores of acres of wet swampy land, always late because wet, and of endless runs, where huge piles of stone lay in unsightly confusion on the borders and all about. If the ground were thoroughly ditched and the stones buried out of sight, there would be a fine mowing field, producing good crops every year, and the land would be transformed in its nature. Where fences have to be made of wood, the farmer is not so likely to chop his fields too small; but even in this case it is well for him to consider if he cannot get along with less fencing. Often a division is made from pure fancy, with no necessity. When it comes to mending, consider if you cannot use a part to patch the rest. The two systems are exemplified in England and on the continent. The fields in the former place are cut into small lots by hedges and ditches; in the latter vast expanses are without fences or other separation, it being cheaper to hire herdsmen or boys to tend cattle or sheep than to build fences. The subject is of some importance, especially when thought of in connection with drainage.—*N. H. Journal of Agriculture.*

UPRIGHT TREES.

When crooked, lop-sided, leaning trees are seen in a wild forest, we call them picturesque, and let it go. But when we see them in a neighbor's orchard, (or our own,) or by the roadside, or in a lawn, we say somebody is to blame, for generally it comes from sheer neglect. As to leaning trees, the history is something like this; when first transplanted from the nursery or the woods, they are straight and tall. They are set out in exposed places, and not being staked and tied up, they soon get out of the perpendicular. This is not to be wondered at, considering the smallness of the roots, and the softness of the soil. It is a very easy matter to prevent this. Let every newly-planted tree be staked and tied up, using broad and soft bands to prevent chafing the bark. Or, in the lack of stakes and bands, use heaps of stones laid over the roots on the windy side, which will ballast them. In case a tree gets thrown over, it can be righted up by loosening the earth about the roots, and drawing it up, and fastening it to a stout stake. If it has stood leaning for several years, it may be necessary to use an axe on one or two obstinate roots. But by all means, get every tree up straight, and then keep it up.—*Agriculturist.*

HAY AND CORN SHRINKAGE BY DRYING.—The loss upon hay weighed July 20th, when cured enough to put in the barn, and again Feb. 20th, has been ascertained to be 27½ per cent. So that hay at \$15 a ton in the field is equal to \$20 and upwards when weighed from the mow in winter. The weight of cobs in a bushel of corn in November ascertained to be 19 pounds, was only 7½ pounds in May. The cost of grinding a bushel of dry cobs, counting handling, hauling and miller's charge, is about one cent a pound. Is the meal worth the money?—*Scientific American.*

For the New England Farmer.

RETROSPECTIVE NOTES.

"KEEPING ORCHARDS CULTIVATED.—*Farmer for October, page 443.*—There is, still, after centuries of observation and experiment as to the best mode of manuring orchards, quite a surprising unsettledness and difference of opinion, as also of practice, as to the point indicated in the above heading,—some maintaining that it is best to keep orchards under the plow, or cultivated for other crops, and some that the plow should seldom or never be used in an orchard, it being best, and altogether most convenient, to keep it in grass, with occasional topdressings of manure, while a few would so far modify the last-named method of management as to have a strip along each side of the rows of trees stirred occasionally or annually with a one-horse plow, or the grass kept down around the trees by a mulch of chip dirt, or other suitable material, or by the use of the hoe. That there should be so much unsettledness of opinion as to this branch of soil culture, after millions of men have been observing and experimenting for centuries, is really an occasion for surprise. In endeavoring to account for the difference in men's opinions and practice as to keeping an orchard in grass or under tillage, I have thought it highly probable that much of this apparent difference would disappear if greater precision of language were employed in the statement or the question at issue. For example, if an advocate of keeping an orchard in grass were asked if he thought that mode of management best during the first five years of the growth of an apple orchard, he would very certainly acknowledge that such was not his meaning, and that he would by all means keep an orchard under hoed crops, or under tillage of some kind, for the first five years of its growth, or even longer. It would be found, if his precise idea were precisely expressed, that the advocate of grass in orchards, or the opponent of plowing, intended only that he deemed it best to manage orchards in his favorite way, after they had attained their maturity or had begun to bear crops. However fond of his favorite notion, no observing and truth-loving advocate of grass rather than tilled crops in an orchard could be found, who would deny the obvious and oft-observed fact that both apple and peach trees grow but a few inches in a year when set in grass, unless the soil is very rich; while those set or growing where the ground is cultivated will make an annual growth of two, or sometimes nearly or quite three feet.

Other points of difference might be taken, and it might be shown that if those who apparently differed very widely would only define exactly the positions they maintained and the positions they opposed, the difference between them would either vanish altogether, or be much less than it appeared before the point at issue was exactly defined. My object in the foregoing remarks has been to show that the difference among farmers and fruit culturists as to keeping orchards in grass or under the plow, like a good many other differences and conflicting opinions, would either disappear entirely, or be greatly shorn of their apparent magnitude, if the positions taken by the opposing parties were but clearly defined and expressed in precise and unambiguous terms. Were this done as to the points at issue, at present un-

der notice, it seems highly probable that several on both sides would find the difference between them more apparent than real, more in words than in belief, and that they could assent readily to the remark made by the editor of this journal in reference to the conflicting views on this subject, namely, "The true course, it seems to us, lies between the two extremes." That is, neither mode of treatment should be exclusively followed, but rather alternated, for orchards continuously in grass do not flourish, and a continuous course of tilling and manuring would so force the trees as to make them tender and liable to disease, as also dispose them to grow wood rather than fruit. Fortunately for those who are willing and apt to be taught by the signals which are given, of either too much or too little care and food, by most of the plants, &c., which we cultivate, the trees in almost every orchard proclaim very plainly what they need in order to attain their best estate. They do so, however, only to those who take notice of the amount and length of the new wood or sprouts produced every year, and who know how rightly to interpret this sign or signal. Whenever the growth of new wood is scanty and short,—say only a few inches or under a foot in the course of any one season,—then the trees proclaim that they need more nutriment and more care, or in other words, that the soil around them needs stirring, cultivating and manuring; on the other hand, when the growth of new wood and of sprouts is abundant, and two feet or more in length, then the trees proclaim that they could bear to be stinted in nutriment, and that the soil around them might bear a crop or two of grass without any detriment to them. Let this guide, signal or request furnished by fruit trees themselves, be carefully noticed and judiciously interpreted by all who have orchards under their care, and there will then be no difficulty, we think, in deciding at any time, whether those orchards would be better in grass or under the plow, and whether in need of fertilizing applications or not; and no difficulty either in deciding that neither course of treatment should be continued many years at a time, unless, indeed, the annual topdressing of grass in orchards, proposed in the *Gardener's Monthly*, should be sufficient to prevent the usual growth-checking effects upon the trees, which grass crops, as usually managed, and without topdressings, have, times without number, been observed to produce. Watching the annual growth of new wood in trees has certainly been a great help to more than one in enabling them to determine what was chiefly needed for the prosperity and success of the trees, and whether it would be better to put the orchard in grass or under tillage.

MORE ANON.

THE quantity of gas obtained from a ton of ordinary gas coal is commonly within the limits of 9300 and 9500 cubic feet, although if the distillation were continued beyond the usual period of six hours, an additional quantity of gas would be obtained, but of inferior illuminating power. The coke left on the distillation of a ton of coal is usually one chaldron of 36 bushels, weighing between 13 cwt. and 14 cwt., or about two-thirds of the original weight of the coal before it went into the retorts.

GRAMMAR IN RHYME.

The name of the author of the following effusion should not have been allowed to sink into oblivion "unwept, unhonored and unsung." On the contrary, he deserves immortality, and the gratitude of generations yet unborn, for we have never met with so complete a grammar of the English language in so small a space. Old as well as young should commit these lines to memory, for by their aid it will be difficult if not impossible for them to fall into errors concerning parts of speech:

1. Three little words you often see
Are Articles *a, an* and *the*.
2. A Noun's the name of any thing,
As *school* or *garden*, *hoop* or *suing*.
3. Adjectives the kind of Noun,
As *great*, *small*, *pretty*, *white* or *brown*.
4. Instead of Nouns the Pronouns stand—
Her head, *his* face, *your* arm, *my* hand.
5. Verbs tell something to be done—
To *read*, *count*, *sing*, *laugh*, *jump* or *run*;
6. How things are done the Adverbs tell,
As *slowly*, *quickly*, *ill* or *well*;
7. Conjunctions join the words together—
As *men* and *women*, *wind* or *weather*.
8. The Preposition stands before
A Noun, as *in* or *through* a door.
9. The Interjection shows surprise,
As *oh!* how pretty—*ah!* how wise.
The whole are called Nine Parts of Speech
Which reading, writing, speaking teach.

For the New England Farmer.

BEING IN SEASON.

Farmers' wives, as well as all other wives, should always be in season about everything. If "fall work" is to be done, do it in the fall, not linger till winter sends his cold, whistling winds to warn you of his near approach.

Be diligent, and in season. Never cause your husband to wait a moment, if possible to prevent it, for, although he may have waited an hour when a lover, without complaining, as a husband he will not do it.

Be punctual as clock-work in all things. Have a regular hour for dinner and supper, and breakfast also if need be, and have the meal always at the appointed hour, unless some very important event prevents.

Never neglect your work to gossip with a friend. If one call when your duties are in the kitchen, invite her to take a seat there, or if it be a stranger, politely ask to be excused, but never give to your husband as a reason for a late, or badly prepared dinner or tea, that you had callers, and could not attend to it. It will be no excuse to him. Better wait fifteen minutes yourself, than have him wait five, by your tardiness. But your not being punctual, will not only be a disadvantage to your husband, but also to yourself—for by not having your meals all nicely prepared at the appointed time, you will feel nervous, heated and cross—will be more irritable than usual, and if one word of fault is found, it will be like a spark fallen upon powder, and you will construct a great cause of unhappiness from it, and imagine yourself after thinking and weeping a few hours, the most miserable of your sex. If your husband comes from the field, tired, dull, out of spirits, and almost cross, and finds you ready to meet him with a pleasant

smile and kiss of welcome, backed by a nice dinner or tea all ready and waiting, believe me, unless he is love-proof, he will come down from his lofty pinnacle of sternness, and meet you with an answering smile, and the meal will pass off pleasantly.

Learn, then, to have everything done in season, and the only way to do so is to commence whatever you have to do, early. Don't sit and read, or even sew, till you feel the time is passing wherein you know you ought to be getting dinner. No, no! get the dinner, and then improve the remaining time in reading, writing, playing or sewing, just as suits you best, and do so with an easy conscience.

If you attend to this little point, believe me, you will save many sighs and tears, many lamentings and repinings, and will live a far happier life, than in indulging in a dilatory process of living.

It is woman's duty to make home as happy as possible, to remove all just cause of complaint, and to be the bearer, rather than the doer of wrong, and no one thing will tend more to promote domestic harmony than strict punctuality in everything appertaining to household affairs.

Try it, and see if my words are not true.
West Amesbury, Oct., 1862. SARAH.

For the New England Farmer.

AGRICULTURE IN COMMON SCHOOLS.

MR EDITOR:—Your learned and respected correspondent, "More Anon," seems to be sadly afflicted in the use of language without accomplishing any precise or definite object, or casting one ray of light on the question at issue. It is not my province to dictate to him how he shall write upon this, or upon any other subject; but it is my right to suggest to him, that, if he expects me to reply to him, he must say something bearing on the merits of the question; in other words, he must answer the objections which I have already made, and those which I may hereafter make, to the study of agriculture in our common schools.

It is in vain for him to pretend, as he does, that he has answered my objections already "in the *Farmer* of August 30th." And he adds, "To this refutation of the objections of Mr. G. in the *Farmer* of August 30th, he has not yet seen fit to reply." In the article of August 30th, there is no answer to the three objections which I had made. I need not repeat these objections here, because in my reply I stated them at length; but this I will say, he has not answered them, because he cannot answer them, and moreover, I have reason to believe, he will not make the attempt.

It is vastly easier for him to deliver a long and learned lecture on agricultural text-books, and tell us, poor ignorant souls, what Prof. J. A. Nash has said and done upon the subject, and what the learned gentleman himself has said and done about it, and what several other wiseacres have said and done, who have had "axes to grind" for their own private use and benefit; it is vastly easier, I say, for him to fill up a long communication in this way, than to meet and grapple with the real rugged question, "Can agriculture be successfully taught in our common schools, without doing more harm than good?" The gentleman is called upon to meet and answer this question—to meet and

answer my three objections fairly and fully, and to the satisfaction of the public—to meet and answer each objection separately, so that the question may stand on its own merits, and not on the "*ipse dixit*" of any one. When he does this, or attempts to do it, he will be sure to receive a respectful reply from me. I insist upon it, that the gentleman shall show, or attempt to show; 1, that agriculture, in all its multifarious branches and departments, can be successfully taught in our common schools, without detriment to the schools; 2, that all our teachers, male and female, both in summer and in winter, are amply qualified, and have all the means and appliances to teach it theoretically and practically; and 3, that all our common school scholars are capable of understanding and reducing it to practice.

Let "More Anon" stand up and face the music, and not back down from what he has undertaken.

JOHN GOLDSBURY.

Warwick, October 14, 1862.

PREPARE FOR WINTER.

Many farmers too long delay the necessary preparations for winter. In this cold and changeable climate, it shows a great want of proper foresight and economy to neglect such repairs and preventives as will secure shelter and warmth for themselves and their stock, and tend to the preservation of the harvests of every kind which have been secured. A board off, or a pane or two of glass gone here and there, may prove the loss of young and tender animals, or of a portion of the potatoes, roots or apples which have been stored away. In such case there is a double loss—a loss of the property itself and of the labor which produced it, and to which is to be added the inconvenience of supplying a like amount, if it be absolutely required for wintering out the stock.

But this is not all. If the places where animals are kept are windy and damp, a large amount of the food that would otherwise go to increase the bulk of the carcass is consumed in making good the waste induced in meeting the large demand for animal heat. It is said by those who have given special attention to this matter, that from *one-fourth to one-third more* food is required to keep up the proper amount of animal heat, for an animal exposed to the cold, than is required for one that is protected from the elements by proper shelter.

So with regard to the house. A day or two spent in making all tight about the underpinning, in supplying whole, for broken glass, and in making the ledges about the windows so close as to prevent them from rattling, or admitting the wind—and similar attention given to the doors—will save considerable expense in the amount of fuel required during the winter, and greatly promote the comfort and happiness of the family. No barn or house can be kept warm at a moderate cost, where the wind is allowed to pass freely under the

floors, as the air which is warmed in the room is made lighter, and is rapidly driven up by the constant current of cold air from below. This condition of things in the room is expensive, uncomfortable and trying, and has a decided effect upon the spirit and manners. No person could long preserve a cheerful equanimity, and be exemplary in tone and manner, under such circumstances. They make a class of trials which no considerate husband should allow his family to contend against.

These are only suggestions. Many other things are to be looked after, which a discreet foresight will place in proper order.

For the New England Farmer.

PREMIUMS FOR HERDS.

MR. EDITOR:—I am pleased with the suggestions in your paper just received, (No. 43, of Vol. 17,) as to the best manner of offering rewards for improving the breed of animals. It certainly must be better to offer them for the best herds bred and reared on the same farm, in a term of years, rather than for the best animals collected at random, without regard to parentage or manner of rearing. In the one case it is merely a reward for skill in selecting, in the other it would be an encouragement to the culture of the "science of breeding."

I remember when my attention was first directed to this subject, hearing a venerable man of 80 years say, there was nothing whatever to be gained, by the first mode of offering premiums. In proof of this, I have more than once known the first premiums for milch cows to be awarded to mere jockeys, who, having heard of a cow that gave a large quantity of milk, purchased her to present at the show, as a matter of speculation, in securing the premium, and a large price afterwards, for the premium cow. The committee examining could have no other knowledge than the appearance of the animal, and the certificates accompanying. What is true of cows, is more likely to be true of horses, and may be more or less true in regard to all other animals. But where they are reared on the same farm, and kept for a series of years, in the ordinary way of keeping, there would be little chance for imposition.

Oct. 25, 1862.

ESSEX.

CURE FOR THUMPS IN HOGS.—About a month since I noticed that a very valuable hog, which I procured for breeding purposes, began to lose his appetite, and soon his respiration became hurried, and attended with a quick, jerking motion of the sides. He also coughed considerably. Never having had any experience with such a disease, I searched for a description of the disease, and a remedy. In the August No. of the *Valley Farmer* I found what I considered a case similar to mine, i. e. Thumps. I tried the remedy, *veratrum viride*, ten drops, in milk. His appetite improved immediately, but it was a week or two before his breathing was less rapid or his cough diminished. He is now about cured, and thriving very fast. I also turned the pig out of his pen in which he had been confined before.—*Valley Farmer*.

ANALYSIS OF FRUIT.

We copy the following analysis of fruit from an excellent article on "Food," in the Patent Office Report for 1861, by Professor L. C. LOOMIS. Hereafter we will present the reader another extract, from the same article, on the subject of *Unripe Fruits*.

The most of our common garden and orchard fruits are composed of nearly the same constituents—a little woody fibre, more or less sugar, and several acids, the most common of which are the malic, the citric and the tartaric. Two or more of these acids are usually found in every fruit, though one preponderates, giving the fruit its peculiar flavor; as the malic in apples and pears, the citric in currants.

At different stages of the growth of the fruit, these various substances are in different proportions, the woody fibre or cellulose usually being the most abundant.

It has been previously mentioned that woody fibre differs but slightly from sugar, so that it will not be difficult to comprehend the fact that, by the action of the acid of a fruit, what is cellulose at one time may be found to be sugar at another.

"Previous to maturity, fruits are formed of a compact cellular tissue, containing the elements of woody fibre, and filled with a liquid containing very little sugar, a gummy substance and a large quantity of free acid. During maturation a part of the acid disappears by the action of oxygen of the air, the cellulose tissue diminishes, and the proportion of sugar increases, inasmuch that instead of hard, woody, acid fruits, we obtain, if the maturation has been complete, fruits that yield a sweet, sirupy juice."—*Turner*.

The chief elements of ripe fruits, therefore, appear to be water, gum, sugar and acids, of which the only one requiring our attention is the acid; sugar, gum and wood having been previously considered.

In medicine the vegetable acids are included among the refrigerants; that is, as possessing in an eminent degree the properties of counteracting the heat of the system. There is much diversity of opinion among writers as to the manner in which this is accomplished and as to the chemical changes that occur in connexion, but all agree that the effect of acids in weak dilutions is to reduce animal heat.

Reasoning *a priori* from this general fact, we might have drawn a fair probability that the spring productions would possess or require acids.

We here find the philosophy of salads. The temperature is daily increasing; the system requires additional means of resistance; nature proceeds to the growth of cooling acid fruits. But before juices can be secreted the structure of stalk and leaf must be erected. At this point we seize the new growth of cellulose and add to it the acid, which would appear in due time. A salad is, therefore, a sort of *impromptu* fruit, having the cellulose of this year and the acid of last. Were the acid unessential, and the cellulose all that our systems demanded, the taste would be appeased by it alone, and there would be no more demand for vinegar with the salad than for butter or sugar.

In the ripened fruit we find all parts fully har-

monized, not only to the taste but to the season. The water quenches thirst and supplies material for increasing perspiration; the sugar is nutritive and imparts an agreeable taste to the whole; the acid dissolves the cellulose and reacts beneficially throughout the system.

Summing up these facts, we find—

1. In the new supplies of food which the spring and summer bring, the calorific element is nearly or wholly wanting.

2. In the same manner that we found a heating element added to nutrition proper on the approach of cold weather do we find a cooling added on the approach of warm. This is fruits, and particularly their acids; from which we conclude,

3. That ripe fruits are not only the most healthful of all food in summer, *but actual conservators of health, and necessary in the economy of nature.*

But if such is the hygienic character of fruit, whence arises the general opinion of its injurious effects, especially in sickly seasons? and what shall be said of those well authenticated facts of fatal results having been induced by them in the extreme summer weather, and of the generally untoward effects attendant upon a free use of the earlier kinds, particularly strawberries, apples, pears and melons?

So far from attempting to deny that such results do frequently follow eating these fruits, we not only admit that the fruit is the direct cause, but that, under the circumstances usually accompanying those particular cases, it is almost impossible that any other result should ensue. This question, or fact rather, of the injurious effects of early fruits demands our careful consideration.

It is alleged that in certain cases fruits are injurious, whereas our considerations above led to the conclusion that they are not only harmless but positively beneficial.

We are, therefore, brought directly to the considerations whether fruits are always uniform in their action, and whether they may not be, and are not, in some cases hurtful.

Before any adverse conclusion can be drawn, two conditions must be fully shown; first, that the fruit was fully ripe; and second, that it had not commenced to decay. An examination of the chemical condition of fruits and food in general in these respects may serve to elucidate the points at issue.

FAREWELL TO THE MILKMAID.

Every one knows the charming part the milkmaid has borne in all English pastoral writings. Poet and novelist alike have written of her simple charms; but if all accounts are true, a recent Yankee invention will banish the milkmaid into the limbo of wooden ships and other obsolete matters. It appears that a milking machine, which had not previously excited any great attention in our own country, was on exhibition at the great London Fair. Every day at eleven o'clock, the inventor milked a cow, to the admiration of a multitude of spectators. It is done by the application of a sort of pump by which the four teats are all milked at once. Orders began to come in for it, and the inventor sold his right for £5000, with a per centage on each sale. It is said that enough have already been sold to cover the first cost.—*Journal of Agriculture.*

ON FATTENING ANIMALS.

The common farmer, who fattens, annually, only a pair of oxen, a cow or two, or a heifer, steer, and two or three hogs, gives too little thought to the process, and has too little system in it, to realize what a percentage of loss he incurs in the want of more systematic management. It is quite clear to us, that twenty-five per cent. more fat and flesh can be made, under one set of circumstances, on the same amount of food, than will be produced on the same animals, under another set of circumstances. We have seen it illustrated.

The first requisite to be supplied is, that the animal to be fatted shall have a warm, and every way comfortable apartment in which to stand, or to lie down, or sleep. Without these preliminaries, there will, inevitably, be loss in all the subsequent proceedings.

In the first place, the temperature about the animal must not be extremely variable, but kept as evenly as possible at a point that will confer the highest degree of comfort. If it be too warm, the animal will become languid and lose appetite; and if too cold, the energies of the food will be required to keep the animal warm, instead of producing fat and flesh. In his article on "Food," a portion of which we have copied into another column from the Patent Office Report for 1861, Prof. Loomis says: "The power of a living body to generate heat or to preserve it is no greater nor more mysterious than that of a stove. When the fire is once started, each will keep warm so long as there is a supply of fuel, and no longer. The one is combustion with flame, the other, combustion without flame. Chemically considered, the processes are not only similar, but identical; the material consumed, the chemical action and the results of the combination being the same. Heat can no more be generated in the animate body without the consumption of fuel than in the inanimate. The living organization must then in the cold season consume, and therefore, by some means, be supplied with a large amount of fuel or heat-generating food, in addition to that needful for sustaining health and strength in the warm season." This high authority shows us how important an even comfortable temperature is, in sustaining health,—and it is only in this condition that good beef and pork can be made.

The next consideration is, that the animal *be fed at regular periods*, so that it may expect its food, and receive it, at a particular time, and not be kept uneasy all the time by an appetite kept sharp and always uncertainly supplied. This may seem unimportant to some, but to the careful observer it will be found to have a decided bearing upon the health and prosperous condition of the animal.

Animals that are stall-fed are often so much

neglected in regard to cleanliness, as to become disgustingly filthy and a burden to themselves. This is an unnatural condition, and must tend to decrease the power of the food used. It makes the creature uncomfortable, and probably prevents that important action of the skin which promotes health and vigor, and indeed, is essential to the preservation of life itself. An ox that is kept clean, by being carded, and even washed occasionally, will be quite likely to improve faster on the same amount of food, than one who is forced to lie down amidst the accumulated droppings of the stall.

"If given irregularly, the animal will consume his food, but he soon acquires a restless disposition, is disturbed at every appearance of his feeder, and is never in that quiet state so necessary to take on fat. It is surprising how readily any animal acquires habits of regularity in feeding, and how soon the influence of this is felt in the improvement of his condition. When at the regular hour the pig has had his pudding, or the sheep his turnips, they compose themselves to rest, their digestion is not unseasonably disturbed, or their quiet broken by unwonted invitation to eat." Some persons make the places where the animals are kept quite dark, but this is a needless and even cruel process. It is only necessary to observe other essential circumstances.

Next to *regularity* in feeding, there should be a judicious selection of food, and great care observed in the manner of feeding it out; that is, not to give the animal all hay or vegetables, one day, and then nothing but grain the next, or the reverse of these. There is also much to be observed in the *preparation* of the food. "The ox that is obliged to wander over an acre to get the food he should find in two or three square rods—the horse that is two or three hours eating the coarse food he should swallow in fifteen minutes if the grain were ground, or the hay cut, as it should be—the sheep that spends hours in making its way into a turnip, which, if it were sliced, it would eat in as many minutes—the pig that eats raw potatoes or whole corn, when either cooked could be eaten in one-quarter of the time, may indeed fatten, but much less rapidly than if their food were given them in a proper manner. All food should be given in such a state to fattening animals, that as little time as possible, on the part of the animal, shall be required in eating." It will not do to stuff and starve by turns.

Vegetables of various kinds, such as turnips, potatoes, beets, mangolds and carrots, are excellent in fattening, but they must not be depended upon so much as some of the grains, which are, eminently, fat producing substances. Corn, with us, stands first and foremost among them all. But it should be given in the form of meal.

Oil meal is also excellent, in proper quantities. A cow may be well fatted on turnips, with what good English hay she will eat; but it may be doubted whether such a course would be the most profitable one for the farmer. It would depend upon circumstances.

The essential points to be observed, are,—

1. Warmth and comfort in every way.
2. A variety of sweet and nutritious food, and especially food containing heat giving and fat making principles; and
3. The utmost regularity in feeding and tending.

THE LARGEST BARN IN THE COUNTRY.

Lancaster County has always been famous for its large barns, and perhaps no county of the same extent in the United States can show so many well built and well-appointed barns as the Old Guard. The Shakers of Lebanon, New York, however, have a barn which, in point of size and completeness is nowhere equalled, and a description of which we feel sure will interest our numerous rural readers, and we therefore give it a place among the "locals." It was recently erected at an expense of \$15,000, and it is thus described:

It is 196 feet long, 50 feet wide, five stories high; the walls of good flat, quarried stone, five feet thick at the foundation carefully laid in lime mortar, cement pointed outside; roofed with tarred paper, cement and gravel. It also has three wings, wooden buildings, which form four sheds about 100 feet long upon the east and west side of the cattle yards, on the south of the main building, with lofts for straw and grain connected with the barn.

The lower story of the barn is a manure cellar, and at the west end it is level with the ground, so that carts can be driven out with ease. The next story is the cow stable, which is on a level with the yard, the cows standing with their heads toward the centre, with a passage between supplied with water pipes and cocks. In this passage roots, cut feed or water can be given in iron feed boxes, which swing on a pivot into the passage. Behind the cows the floor drops a couple of inches, a space of three feet, and back of that rises again. The depression is to hold the manure. On the rise behind are iron rails, upon which cars run into the west end and over a space about 25 feet wide, and discharge their loads, the rails and a turn-table being so contrived that the manure is well distributed with but little labor. The idea is entertained of making the whole cellar into a liquid vat, which could be distributed by its own gravity upon the lower part of the farm, or sent higher up by the water power that drives the mill not far distant. The cows are all fastened to their stalls at each milking, in summer, and all at one movement. They are driven in all together, and each one takes her place where her name is printed overhead, and then by a pull of a cord all the movable stanchions are closed. They are opened by a reverse motion, and all the cows hurried out in a drove, so that they never make a deposit on the floor. They are left a few minutes to do that in the yard, before sending them to pasture.

There are six large ventilators from the rear of

the stalls to the roof. The floor above them supports the great hay mows, between which is the floor for feeding hay, which is sent down to the cows through box tubes, and these, when empty, also assist ventilation. There are openings from this floor into the straw lofts over the sheds, and also to the store rooms for roots and grain.

The next floor is the grand drive way for loads of hay, 16 feet high and 196 feet long, with ample space at the west end to turn around. This floor opens upon a public road, and is but little above its level, so that loads come in easily at the top of the barn. Over this floor is a fifth story, only the width of the floor to give room for work, ventilation and light. Half of the many windows are glass and half slatted blinds. The hay is nearly all thrown down. In case of need, the large space at the end could be filled, but it is thought that it will not be necessary, except with corn, which can be husked there and thrown down a spout into a large, airy granary over the western shed.

THE AGE OF OUR EARTH.

Among the astounding discoveries of modern science is that of the immense periods that have passed in the gradual formation of the earth. So vast were the cycles of the time preceding even the appearance of man on the surface of our globe, that our own period seems as yesterday when compared with the epochs that have gone before it. Had we only the evidence of the deposits of rocks heaped above each other in regular strata by the slow accumulation of materials, they alone would convince us of the long and slow maturing of God's work on earth; but when we add to these the successive populations of whose life this world has been the theatre, and whose remains are hidden in the rocks into which the mud, or sand, or soil of whatever kind on which they lived has hardened in the course of time—or the enormous chains of mountains whose upheaval divided these periods of quiet accumulation by great convulsions—or the changes of a different nature in the configurations of our globe, as the sinking of lands beneath the ocean, or the gradual rising of continents and islands above; or the slow growth of the coral reefs, those wonderful sea-walks, raised by the little ocean architects whose own bodies furnish both the building stones and cement that binds them together, and who have worked so busily during the long centuries that there are extensive countries, mountain chains, islands and long lines of coast, consisting solely of their remains—or the countless forests that have grown up, flourished, died, and decayed to fill the store-houses of coal that fed the fires of the human race—if we consider all these records of the past, the intellect fails to grasp a chronology of which our experience furnishes no data, and time that lies behind us seems as much an eternity to our conception as the future that stretches indefinitely before us.—*Agassiz*.

PULLING AT THE HALTER.—To cure this bad habit, some recommend hitching a rope to the horse's tail or hind leg, then to tie him to a post, in such a way that, when he pulls, he will be thrown down, or at least be made very uncomfortable. A subscriber professes this: "First, get an oxen

strong halter, and hitch him to an outer limb of an apple tree. Now, gently tease him, and provoke him to pull. The branch will yield, but still hold him fast. Tease him again and again, until he finds that he can not break his halter or effect anything but his own discomfort. Repeat weekly until the lesson is thoroughly learned, and he will at length cease to pull when tied to a post."—*Am. Agriculturist*.

For the New England Farmer.

THE PATENT OFFICE REPORT.

It would seem as if some ingenious individual about the Patent Office must have taken out a patent for improvement in the names of distinguished agriculturists. Going to the war for glory, being killed and having your name entirely misreported in the dispatches, is nothing to writing for the Patent Office Report. When we furnished an article on *English Agriculture* for the Report of 1860, and the first half of it was published, and the other half omitted, without a note to indicate that there was any other half, we thought it rather a poor exhibition of ourself. To be sure, the then Commissioner paid us for the whole, which, in a business way, was honest enough, and he promised to publish the rest in 1861, which, no doubt he intended to do; but as the principle of rotation has been applied to that office, two or three times a year, for some years past, and each incumbent repudiates all that his predecessors have agreed to do, we have suffered, no more, it is presumed, than others.

What sort of head we have now, in the agricultural department of the government, remains to be seen. Mr. Holloway is responsible for the Report of 1861, but he is gone, and another Pharaoh reigns in his stead. We trust Mr. Holloway took his proof-reader with him, for their own mothers would not recognize some of the contributors that are made to figure in this book. Here is an article on sheep-breeding by Joseph Cape, of Pennsylvania, written in fact by the well known breeder whom we know as Joseph Cope. And who, do you suppose, wrote the next article, purporting to be written by Richard S. Tray, of Lynn, Mass.? No less a personage than our good friend Mr. Fay, as good an indorser of an opinion on sheep, as any in New England. It is bad enough to write the name of Mr. Grinnell, of Greenfield, who contributes an excellent article on *Farming in the New England States*, as Mr. Gunnell, although he is alive to defend himself, and is now, we believe, chief clerk in the Agricultural Department at Washington; but when it comes to recording, for the benefit of posterity, the name of the old patriarch in agriculture, Jethro Tull, as Jethro Gull, as is done in Mr. Warder's article on Strawberries, at page 181, it is adding insult to injury. At page 449, Mr. Rotch, who would

be among the last to make such a mistake, is made to call *Hubback*, the famous ancestor of the short-horns, by the name of *Huback*. How many more goodly names are so buried under these inexcusable blunders, we may never know. It is no excuse to say the handwriting is not plain. A man that does not know the names of the Apostles, has no business reading proof for the New Testament.

The present volume contains many valuable articles. As its contents have before been noticed in the *Farmer*, we will confine our remarks to a few subjects which deserve the attention of many of our readers.

RECLAIMING SALT MARSHES.

The article by Mr. Clift, of Stonington, Ct., on "Salt Marshes, the mode of reclaiming them, and their value," is of very great practical utility. The index, by the way, refers to it as at page 243, which is a mistake for 343. There is a vast extent of this marsh land, all along the Atlantic coast, and as far up the rivers as the tide flows, and we have never known of an acre of it that has been thoroughly reclaimed, which has not proved of great value. To thoroughly reclaim it, the sea water must be excluded, and kept out; for although salt is an excellent article for manure, when we get above three or four bushels to the acre at a dose, it is too much for common crops, although mangolds and some other crops are fond of a higher seasoning. There is always fresh water running into the sea, and of course, for the streams that pass through the marsh, and for the rain water, as well as for any leakage through the dikes, there must be floodgates, opened and closed like canal gates, by the water itself. We use the ward dike, which primarily means a ditch, in the sense of embankment, which has good authority. A dike usually includes a ditch and bank, as constructed for drainage purposes. If, by means of a dike, the salt water can be excluded, and fresh water raised over the land, the salt will be washed out far more readily. It will be recollected, that salt does not go off by evaporation, which is, indeed, the very means used to separate it from water, but washes downward. The freer the passage downward, the sooner will the salt marsh be civilized into arable land. It is said that about three years, in our climate, give sufficient time for the salt to wash out, by rains, from salt marsh so as to freshen it for ordinary cultivation.

The experiments recorded by Mr. Clift would, of themselves, be sufficient to show that these marshes are readily adapted, not only to the production of hay, in the largest quantities, but for fruit gardens, market gardens and grain and hoed crops. But all who have visited the immense tracts of reclaimed marshes in England, or read

the accounts of them, know very well that the very heaviest crops of wheat in England grow on just such lands.

Much of the land reclaimed from the sea, in Great Britain, has been rescued at once, from under the tides, by building sea-walls, and this land, which is a sort of silt or fine sand, soon becomes good, arable soil. This is not, however, properly salt marsh. The Lincolnshire Fens, on one level of which there are 300,000 acres, seem to be very much like our salt marshes, having a black soil of varying depth, from one to six feet, and more. We saw upon them crops of wheat ready for the reaper, estimated, by good farmers, at fifty-six bushels to the acre, and it is not an uncommon practice to follow such a crop with a crop of oats, *cut in* with a drill without plowing or manuring, a severity of cropping never thought of on any other land, except in California, where two crops of wheat are sometimes taken from one sowing, the last being raised from the scattered seed of the first, and known as a *volunteer crop*.

To make salt marsh arable, we think it should be regularly tile-drained. Mr. Clift has found that the ordinary narrow open drains used in salt marsh are sufficient for the drainage of these lands, for the best grass crops, but such drains are an obstruction to all cultivation, and by their liability to partial obstruction, are far less effectual than tiles.

Mr. Clift suggests that where these marshes lie in large tracts, and are too extensive for individual capital, companies might be formed to reclaim them. He gives accurate statements of several experiments, in which every crop adapted to the climate was found successful. One gentleman has 500 acres, in New Jersey, a part of which he has reclaimed, and gets from it two crops of grass annually, which at \$20 a ton, nets him \$60 an acre in New York market. He thinks his 500 acres will yield him \$30,000 a year, clear income!

BREEDS OF SHEEP.

Mr. Fay's short essay upon this subject contains the true idea upon which it is for the interest of New England farmers promptly to act; namely, to stock their farms with sheep valuable for the greatest yield of both wool and mutton. Climate, soil and market are the three considerations in choosing the breed for a given locality. The climate and soil of New England are well adapted to almost any breed. Perhaps the Leicester, as being too delicate and luxurious in its habits, may be an exception. The markets of New England are near enough and large enough, to consume all the wool and mutton likely to be produced. Indeed, Mr. Fay states that more sheep are annually sold in Brighton and Cambridge markets, than are raised in all New Eng-

land. Wool, being lighter, and easily kept on hand for a better market, is a more convenient product than mutton for remote localities. The Down sheep, of which the famous South Downs were so long regarded as the type, are recommended by Mr. Fay as the best for all purposes. His own flock of Oxford Downs, from which he has done much to supply our farmers, give him the best foundation for this opinion. There are larger breeds, and there are finer-wooled breeds, and there are breeds which mature earlier, but considering quantity and quality of wool, and of mutton, early maturity, fecundity, aptitude to fatten and hardiness, the Oxford Downs probably stand at the head of the list, though other crosses of the Downs may not be far below them. Many farmers find it profitable to sell their lambs, so as to keep down their stock through winter. Early lambs often bring more in the meat market, than the same animals would bring, at eighteen months.

CONCLUSION.

This volume contains many valuable essays, but it plainly indicates the want of any clear comprehensive head, to give it shape and system. Perhaps such a report is worth what it costs the government, but certainly it does no credit to the country, or its compiler. A private publisher, who should issue such a series of blunders in orthography, or a work so devoid of system, would be disgraced. We hope to see a government report upon agriculture, that we should not be ashamed to send out of the country

H. F. FRENCH.

SALT AND ITS OFFICES.

Some modern agricultural writers have doubted the necessity of giving animals salt. The remarks as to the effects of salt upon health, by Prof. Johnston, may be relished by those who still put salt in their own puddings, and allow their cattle a little now and then. He says:

The wild buffalo frequents the salt licks of Northwestern America; the wild animals in the central parts of South Africa are a sure prey to the hunter who conceals himself behind a salt spring; and our domestic cattle run peacefully to the hand that offers them a taste of this delicious luxury. From time immemorial it has been known that, without salt, man would miserably perish; and among horrible punishments, entailing certain death, that of feeding culprits on saltless food is said to have prevailed in former times. Maggots and corruption are spoken of by ancient writers as the distressing symptoms which saltless food engenders; but no ancient or unchemical modern could explain how such sufferings arose. Now we know why the animal craves salt, why it suffers discomfort, and why it ultimately falls into disease if salt is, for a time, withheld. Upward of half the saline matter of the blood—57 per cent.—consists of common salt, and as this

is partially discharged every day through the skin and the kidneys, the necessity of continued supplies of it to the healthy body becomes sufficiently obvious. The bile also contains soda as a special and indispensable constituent, and so do all the cartilages of the body. Stint the supply of salt, therefore, and neither will the bile be able properly to assist the digestion, nor allow the cartilages to be built up again as fast as they naturally waste.

MUCK---TREATMENT OF.

The kind of muck to which we shall in the present instance refer, is that found in low places in uplands, or forming the soil of fresh marshes on the edges of rivers, in consequence in part of washings from the upland, and in part from sedimentary deposits from overflows. Such muck usually contains a large amount of organic, and a still larger proportion of inorganic matter, resulting from the decay of organisms during all time.

For want of aeration this muck is frequently acid, and therefore requires treatment before it has any value as manure, unless it be intended to be used as a manure for potatoes, for which purpose it is generally successful if placed in the drills, and the potatoes thrown upon it, and always successful if the muck be accompanied with slight applications of wood ashes, or the lime and salt mixture we have so often recommended. For all other crops, however, the muck in its raw state has not sufficient value as a manure, to pay for its carriage, manipulation, etc.

If treated in the following manner, muck may be rendered of high value. It should be dug in the summer or fall, and left exposed on the ditch banks for the winter; if deposited sufficiently early in the season on this ditch bank, to part with its water, it may be mixed with the lime and salt mixture, first thoroughly prepared, at the rate of four bushels of the mixture to each cord of the muck. The following spring it will be ready for use, not as manure, but as a valuable adjunct in the vicinity of a manure shed. Near stables, etc., and underlying the bedding of animals, it has a high value, for it receives the noxious gases emanating from the surface of their bodies, absorbs urine, and acts generally as a deodorizer; on the removal each day of the solid excreta from the stalls, this may be mixed under the manure shed with sixteen times its bulk of the decomposed muck, and all the gases emanating from the decomposition of the manure be absorbed and retained by the muck.

The treatment at the ditch bank is quite necessary to save cartage, for if treated there as we have recommended, it will lose half its weight without parting with any of its value; the portions parted with being simply water, while the freezings and thawings, assisted by the lime and salt mixture, will tear it apart, correcting its acidity, and rendering it as pulverulent as ashes. Some prefer leaving it exposed for the winter, carting it in the vicinity of their barn-yards, and there mixing the muck with the lime and salt mixture; where wood ashes can be procured, they may be used instead of the lime and salt mixture.

In the compost heap, this decomposed muck has great value, not only as a divider of manure, and in being capable of absorbing all gaseous and

queous products of decomposition, but by having its own integrants so altered in condition as to become food for plants. If, at the lower end of the compost heap, a cistern be sunk, supplied with a pump, so as to return the drainage frequently to the top of the heap, the decomposition will go on without *fire-fanging*, and the soluble portions of the manure will become equally divided throughout the mass, and after sixty days the whole mass will be sufficiently homogeneous in character to be ready to be carted to the field when it is required for use.

We observe many writers now recommending the carting of the muck from the swamp directly to the field, leaving it there in heaps to be benefited by the disintegrating influences of the winter, but they certainly overlook the fact that the great value of the muck as an assistant in the compost heap, is not availed of by such practice.
—*Working Farmer*.

TOP-DRESSING MEADOWS IN NOVEMBER.

There will be many days during this month when hands cannot conveniently work at any time, on account of snow and frost. On such days manure may be collected with broad hoes into heaps, and hauled out on meadows, and spread evenly over the entire surface of the ground. If it is fine, well rotted manure, or compost, the better way is to spread it as it is hauled out, instead of putting it in heaps. It will require only a few minutes longer to spread a load from the wagon or cart with a shovel than to unload it in heaps; and if it is spread as fast as it is drawn out, the job will be completed in a more farmer-like manner than it usually is when the manure is left in heaps, because when it is spread from the cart it will usually be distributed much more evenly than when left in heaps. Unless a man is very careful, he will not leave enough in a heap, and he will leave too much.

A thin coat of well rotted manure spread over a meadow in November will be the means of producing a heavy crop of grass next season. But it is not the best policy, by any means, to allow manure to remain in heaps during the winter, and spread it in the spring. It would be better to pay a hand a double price per day in order to have it spread before winter comes than to allow it to remain in heaps on meadow land until next spring. Surface manuring in late autumn on meadows, pastures and lawns, will start the grass early next spring, and produce a bountiful crop during the season, providing the soil is not too dry.
—S. EDWARDS TODD, in *Country Gentleman*.

MAIZE PAPER AND MAIZE CLOTH.—Mr. John Jones, of this city, has received from his son at Vienna, and has shown to us, some very handsome specimens of paper made from maize straw, at the imperial paper manufactory, Schloßmühle, near Gloggnitz, Austria. We believe it cannot yet be produced so cheaply as paper made of rags. But in the experiments necessary in making the paper, it was discovered that the maize plant contained a fibre capable of being spun or woven, which furnishes in its waste a cheap paper. Dr. Von Welsbach, the Director of the Imperial Printing Establishment in Vienna

has secured patents in all the great European States for extracting the maize fibre in a form like flax, so that it can be spun or woven like flax thread. In these days, when there are so many experiments to procure a substitute for cotton, the trial of the maize plant is of interest.—*Providence Journal*.

For the New England Farmer.

CLERGYMEN IN WAR TIMES.

MESSRS. EDITORS:—We read in the history of the war of 1775, that patriotic clergymen were in the country, and that they took an active part, by every possible means, to assist in its defence against a powerful enemy, and ultimately gain its independence. Since my remembrance, these clerical heroes were active preachers of the Gospel in almost every neighboring town. It does me good to look back and see with what enthusiasm they engaged in every good work. In war time, they would mount their pulpits to attentive audiences, and proclaim the dangers of the country, and the necessity of repulsing the enemy, and at the same time kindling the patriotism of the young men into a flame. These good ministers made more volunteers than all the recruiting officers, or the edicts of government, put together; they, (the volunteers) were forced by no threats of penalty, but persuaded by a sense of necessity and duty, and as conscripts, they did not labor under the stigma of being "drafted."

In those days, clergymen shared privations, losses and sufferings with their people; an anecdote will illustrate how they got along in a neighboring town to help their minister; the inhabitants were mostly farmers, and in small towns, all were included in one society. In the pressing necessity of the times, when money was scarce, or rather not to be had, the members of Mr. C.'s society were summoned to meet in convention, to consult upon some method to supply the gastric requirements of the minister and his family. After some deliberation and talk, one loquacious member, noted for doing business for every body, got up and made a speech, stating that Mr. A. could furnish a certain description of produce, and Mr. B. another kind, and Mr. C. a third sort, and so on to the middle of the alphabet, and I can do the rest, and I am sure the Rev. Mr. C. cannot eat the d—— and all. In the present struggle, a most gratifying circumstance is the unanimity of all denominations of good Christian ministers, in using their influence to suppress the rebellion.

Now, as in revolutionary times, the ministers have done as much, if not more, to collect an army of volunteers as the recruiting officers. All religious prejudice appears to be out of the question, and the main question, the best way to subdue the rebellion, and conquer a peace by restoring all mankind born into the world, to equal natural rights and privileges. The time has come again which "tries men's souls," and if there are a few clergymen taking a South side view, or halting between two opinions, it will not excite our wonder, making allowance for the fallibility of human nature, but I believe most of them are sound to the core. In the days of the revolution, there were a few tory, or loyal ministers, but they had to keep their tongues in their heads, and their heads between their shells.

SILAS BROWN.

WINTER CARE OF TENDER PLANTS.

Now, before the ground freezes, is the time to give attention to such tender or half hardy plants as we wish to preserve. The losses that annually occur for the want of it are numerous and vexatious, when a little pains at the proper time would be quite likely to prevent both.

We have no good out-door *grapes* yet, that are sufficiently hardy to bear the changes of our winters. The *Isabella* is often killed to the ground, and the *Concord* is occasionally. If either of these are severely pruned soon after they shed their leaves, and then carefully bent over upon the ground and covered three or four inches with soil, they will be kept in a state of perfect preservation until spring. They may then be raised early or late, according to their locality or the state of the season. When a late frost is feared, they may be kept down until the 20th of May, and upon being taken up then, will be found fresh and plump, and their blossoms will be quite likely to escape injury by frost. Covering with straw, leaves, sawdust or hay, does not have the same effect as covering with soil. Under these the plants shrivel a little, and do not present that fresh and full appearance that they do when covered with soil. They are probably partially dried by the searching fall and spring winds, or by winter winds when the ground is not covered with snow—while those that are covered with soil do not seem to lose a particle of their juices.

Blackberry and raspberry bushes may be treated in the same way, though the operation is a more difficult one, on account of the thorns on the blackberry, and the brittleness of both the blackberry and raspberry. But where they are so laid down they come out in very fine condition in the spring.

With tender *rose bushes* another course may be pursued. Head them down—which is usually favorable to the rose—and bind hay or straw around them, and then insert short and thick white pine boughs into the ground and tie them about the hay that encloses the bush. But in a mellow soil it is not difficult to heel the bush over a little upon the surface with the aid of a spade, and cover it with soil.

The *Wistaria*, and any other climber or shrub that is not perfectly hardy, may be greatly protected by laying it upon the ground and covering with evergreen branches, or where they cannot be conveniently laid down, have the branches set against and tied around them. Under this treatment the plant will come out in the spring full of sap and vigor, and immediately start into a rapid and healthy growth. When this takes place, the cultivator is amply repaid for his care, and greatly enjoys the results of his labor. The appearance of the garden and lawn depends considerably up-

on the preparation which is bestowed upon the plants during their winter life—for when neglected, they come out in the spring in a starved and shrivelled habit that requires half a summer's warming and watering and fostering to bring them up to a flourishing condition. Let this be remembered, and the proper care bestowed in season, and there will be less regret for the loss of favorite plants, and less complaining because they do not make a better appearance.

A NOVEL RAM.

There is safety in a multitude of rams, as of counsellors. Yankee invention does not rest content with its "Monitors," "Puritans" and "Kekukus," but keeps on trying to make something simpler and better than these. About a thousand models of novel war vessels have been lodged at the Patent office; and for many hundreds of them patents have been issued. Some are good from stem to stern; others are bad all over; and some have one or two new points which, if combined with other inventions of tried and improved excellence, would be worthy of immediate adoption in the American navy. The newest and oddest ram of the season is an offspring of the mechanical genius of Mr. King, of this city. The hull is that of an ordinary steamship, built of iron, with two screw propellers at the stern. It is roofed like the exploded *Merrimac*, not with rails, however, but with iron plates, lapping over each other like the slates of a house roof. The thickness of the plate is three inches. Behind the plates is a second roofing of India rubber, of the same thickness. The whole is compactly joined together, and (such is the theory of the inventor) will vibrate and yield elastically to a cannon ball, but cannot be pierced or knocked down. The angle of the roof is such as to make the missile glance off; and the iron plates are lapped over in a manner reverse to that of house-slatting, so that they cannot be torn up at the edge. Nothing but actual experiment can demonstrate how far this novel plan may be trusted in a close encounter with the tremendous modern artillery. The prow of the ram is a long cast steel beak, fashioned on a familiar model, entirely submerged, and capable of dealing a terrific blow. Supplementary to this is a novel and (literally) a striking point. It is a sharp steel prong which is thrust out suddenly and with great force, or drawn back, by a separate engine at the middle of the vessel. This prong is worked with great rapidity, and would tear a hostile vessel to pieces with a succession of staggering blows. The purpose of the inventor is to strike with the cutting prow, and then to finish up with a dose of the prong, until the enemy cries, "Hold, enough!" This singular ram may be seen at the American Lloyds, 35 Wall Street.—*Journal of Commerce*.

LAMPAS IN HORSES.—When lampas appear, sponge the horse's mouth a few times with a solution of alum water. We have practiced this simple remedy, in many cases, and always with satisfactory results.—*Working Farmer*.

For the New England Farmer.

THE BIRDS OF NEW ENGLAND---No. 24.

GOLDFINCHES—CROSSBILLS—REDPOLLS.

Yellow Bird—Pine Finch—Red Crossbill—White-winged Crossbill—Lesser Redpoll—Mealy Redpoll.

Prof. Baird describes eight species of American Goldfinches, (genus *Chrysomitris*), of which two only are common to New England, the Yellow Bird and Pine Finch.

The YELLOW BIRD, or AMERICAN GOLDFINCH, (*Chrysomitris tristis*, Bonap.) is a well-known, common and resident species, generally distributed over North America. In the winter they roam about the country in flocks, sometimes of several hundreds, in their humble attire of plain flaxen color, subsisting entirely upon seeds, of which they seem to find an abundance, apparently unmindful of the severity of the winter. On the return of warm weather they resume their bright livery of gold and black, and pass the summer in constant gaiety, ranging the fields at will in small parties, or are engaged in rearing their young. So strong is their gregarious and wandering disposition that considerable parties are seen in mid-summer, the males tuning their lively songs together, and often seem striving to excel each other in the delivery of their varied, cheerful and highly agreeable warble.

They delay the duties of incubation till late in the season, breeding mostly in July and August, when the newly ripened seeds of the various plants on which they feed are matured. The nest is commonly placed in the fork of a tall bush, apple-tree, or forest sapling, and is built of bark and rootlets, and lined with down from thistles, dandelions and willow catkins. The eggs are pure white, usually four. In winter and spring their roivings seem to be directed by the abundance or scarcity of food, rather than by climatic influences.

The length of this bird is five inches; alar extent, eight. In summer the male is bright, lemon yellow, fading into white on the rump, with the forehead, wings and tail black; the female is paler. In September the yellow changes to brown olive, and through the winter the sexes resemble each other.

The PINE FINCH, (*Chrysomitris pinus*, Bonap.) spending the summer much farther to the northward, is seen here only in winter, and its migrations being governed by the supply of food, it proves but an irregular and uncertain visitant, at times being seen in considerable flocks, and again not seen for several seasons. I have taken them at Springfield in November, and in almost every winter month; they also often winter in Pennsylvania, and have been seen in the Carolinas. While here they subsist almost wholly on the seeds of evergreens, as the larch, spruce and hemlock, and of alders and birches, and are quite unsuspicious. In their call-notes and in their manner of flight, they greatly resemble the preceding species.

Audubon met with them on the coast of Labrador, toward the end of July, accompanied by their young broods, but in no case was he able to find a nest, though they doubtless spent the summer in that vicinity. He observes that they are always abundant in winter in the State of Maine. Its habitat extends across the continent, from the Atlantic to the Pacific.

The length of this species is four inches, breadth eight. Upper parts dark olive brown, streaked with black; beneath, whitish, streaked with dusky; concealed bases of the tail feathers and quills sulphur yellow.

The RED CROSSBILL, (*Curvirostra Americana*, Wilson,) is another of those transient visitors from the north, chiefly seen here in the winter, but is not unknown at other seasons. It is supposed to inhabit the northern parts of the continent generally, migrating southward in winter; but it is not mentioned in the *Fauna Boreali-Americana* as a bird of the fur-countries. It is known to spend the whole year among the mountains of Pennsylvania. Some winters it is quite abundant in this State, as in the winter of 1859-60, which was so remarkable for the appearance of many rare northern birds, when large flocks of them inhabited the pine woods for several months, and were even quite common as late in the summer as June. A few remained till September, but since that time have been rare. In the spring months they often visited the orchards, for the seeds of decayed apples, of which they were very fond; but generally the cones of the pitch pine were their chief dependence for food, the seeds of which they extracted with great dexterity. This species is generally regarded as a regular winter resident in all those extensive pine forests lying north of latitude 40°; Audubon says he found them more abundant in Maine, and in the British Provinces of New Brunswick and Nova Scotia, than elsewhere; and in Maine was assured of its nesting on the pine trees in the middle of winter, while the ground was snow-covered; and we have accounts of a closely allied species breeding at the same season in Europe.

During the months of February and March, 1860, the males were full of song, often chasing each other through the wood, and for several weeks I looked in vain for nests, though from appearances I strongly suspected them to be nesting. At this time the males had a very agreeable, low, warbling song. The flight of this species is strong, swift and undulating, and while on the wing a constant chattering is kept up, which often produces an agreeable effect where the flock is somewhat numerous. Their common call-note is a quickly repeated *chip, chip, chip, chip*, but while feeding they are quite silent, or only utter a feeble *whittitish*, scarcely audible beyond a few paces.

The Red Crossbill is seven inches in length, and ten in alar extent. Color of the old male, dull light red, wings and tail black; female, greenish olive tinged with yellow on the rump and head. Says Baird, "The immature and young birds exhibit all imaginable combinations of the colors of the male and female." I have found the males, while here, apparently much more common than the females. When confined in wire cages they use their bill and feet in climbing, much like parrots. But to give a particular account of the peculiar habits, and ways of feeding, of these interesting birds, would require much space.

The WHITE-WINGED CROSSBILL, (*Curvirostra leucoptera*, Wilson,) like the preceding species, is a general inhabitant of the northern parts of America, migrating southward in winter, and said to be more commonly seen here than that species. Like them, they are gregarious, and sometimes appear here in immense, half-famished flocks in

the depth of winter, coming suddenly, stopping a few days or weeks, and then disappearing as suddenly as they came. Some, however, at times reside in our fine forests regularly throughout the winter, but I have never seen them after the return of warm weather. Generally, they seem to be less common, and less regular visitants to the United States, and appear to be rather more northern in their habitat. Dr. Richardson says this species "inhabits the dense white-spruce forests of the fur-countries, feeding principally on the seeds of the cones." In September he says they collect into small flocks, and in the depth of winter retire from the coast to the thick woods of the interior. Nuttall quotes from Hutchins respecting its nest, which is said to be built half-way up a pine tree, of grass, mud and feathers; the eggs are five, white, with yellowish spots. This species is slightly smaller than the Red Crossbill, is more sprightly in its motions, and feeds almost wholly on the small cones of spruce, hemlock and white pine, leaving the large cones of the pitch pine to its stronger relative, the Red Crossbill.

The males are bright carmine red, whitish on the belly; wings, with two bars of white, which with the tail are black. Female, brown, tinged with olive.

The LESSER REDPOLL, (*Aegiothus linaria*, Cab.) is likewise of boreal habits, only known here in winter, and then at uncertain intervals, though sometimes straying as far south as Philadelphia, where it is seen but once in many years. This small, interesting, and beautiful species is sometimes seen in this State in large flocks, as in the latter part of the winter of 1859-60, resembling in its notes and in many of its habits, our common Yellow Bird, but generally it is rare and but little known. Dr. Richardson speaks of it in the *Fauna Boreali-Americana* as "one of the few permanent residents in the fur-countries, where it may be seen in the coldest weather, on the banks of the lakes and rivers, hopping among the reeds and canes, or clinging to their stalks." In the spring of 1860 they remained here till April, roving about the fields in large flocks, feeding on the seeds of weeds, and of the birch and alder; were at times quite musical, and always appeared unsuspicious. They also inhabit the north of Europe, and are said to build a nest almost like the nest of our Yellow Bird, laying five bluish-white eggs, marked with reddish spots.

Length, five and a half inches; alar extent, eight and a half. Above, grayish, inclining to yellowish, and streaked with dusky; crown, dark crimson; below and rump, pale crimson, approaching white on the vent. The female is without the roseate tint below and on the rump, and the breast is streaked with dusky.

The MEALY REDPOLL, (*Aegiothus canescens*, Cab.) I introduce with hesitancy as a bird of New England. It is said, however, to now and then visit Maine, and is commonly reckoned as a bird of this State. De Kay describes it as a bird of New York. Audubon procured specimens of this bird in Newfoundland and New Brunswick, and states that at one time he had in his possession specimens that were taken in the State of New Jersey, and others taken near Baltimore, in Maryland. He found them in Newfoundland in August, where he had an opportunity of observing their habits for a time, which he says do not much differ from those

of the common Lesser Redpoll, which is described above. Evidently it may be sometimes found in our limits. It is not mentioned in the *Fauna Boreali-Americana*, or Northern Zoology, of Richardson and Swainson as a bird of the fur-countries, neither is it described by Nuttall.

It is very nearly the size of the preceding, and quite similarly colored.

J. A. A.

Cambridge, Mass., 1862.

HOW TO BURN COAL.

At this season, when this important article of housekeeping is so costly, it would be well to practice the closest economy in its use. This is not, by any means, done; coal is either wasted in consumption or else thrown out in the ashes. Nearly all, or at any rate, the greater part of our ranges and stoves have four doors, two large ones opening on the grate, and two smaller ones for lessening the draft and putting in the fuel; now, when the fire is started in the morning, it should be built only in one end of the grate, the other being full of coal; by this means the amount of wood required (which has also increased in price) is much reduced, and the coal ignites more quickly, the fire soon spreading to the green fuel first applied. When the stove is not in use for any especial purpose, such as baking or roasting, rake the fire clean and fill the grate as full as it will hold, then close up the draft openings, oven and all, and throw the small doors wide open, the fuel is then slowly roasted away to ashes and a good, clear fire at all times readily obtained. By far too much fuel is thrown away in the ashes; buy a patent sifter [Sanford Adams',—Ed. *Farmer*.] and screen them, picking out all the refuse, white cinders, &c., and you will be astonished at the result, fully one-third of the ashes may be rescued from the pile and re-consumed. These hints should not be neglected; we have tried them and know their value.

RAPID GROWTH OF VEGETABLES IN NORWAY.

In a valuable treatise on the vegetable productions of Norway, which has been published by Dr. Mueller, in connection with the Norwegian department of the Exhibition, some extraordinary facts are related respecting the influence of the long duration of light, during the summer months, on the growth of vegetables in the higher latitudes in Norway. At 70° N., it was found that ordinary peas grew at the rate of three and a half English inches in twenty-four hours for many days in summer, and that some of the cereals also grew as much as two and a half inches in the same time. Not only is the rapidity of growth affected by the constant presence of light, but those vegetable secretions which owe their existence to the influence of actinic force on the leaves, are also produced in far greater quantity than in more Southern climates; hence the coloring matter and pigment cells are found in much greater quantity, and the colored part of vegetables is consequently deeper. The same remark applies to the flavoring and odoriferous matters, so that the fruits of the north of Norway, though not equal in saccharine properties, are far more intense in flavor than those of the south.

For the New England Farmer.

AN AUTUMNAL DAY.

"The melancholy days have come,
The saddest of the year—
Of wailing winds and naked woods,
And meadows brown and sere."—BRYANT.

Thus plaintively and beautifully sings one of our most valued American poets. Who that has spent a week in the country at this beautiful twilight of the year, when all nature is dressed in the varied colors of the rainbow, and is breathing forth inspiration from hill-side and valley, woods and mountains, can fail to join with the poet in singing—

"The melancholy days have come,
The saddest of the year."

This is the season when it is well for the merchant to leave his store, the professional man his study, and the mechanic his shop, and, taking a walk over the brown fields, and through the variegated woods, to listen to the voices of nature as she proclaims them in the falling leaf, the fading flowers and the departing birds.

Our joy is different from that experienced in midsummer. Who can gaze upon an old, deserted homestead, where once the voices of happiness and merriment resounded, and one where a happy family once dwelt, united together, and not feel a melancholy that rarely comes over the soul at any other time?

In autumn we miss the fragrance of the lovely flowers, and the singing birds, but are not pleasures and enjoyments found both within and without, that belong peculiarly to this season of the year? Do not, then, remain housed at this season, weeping over the "Last rose of summer," and the sudden departure from your garden of some favorite bird, that has been gaining your affection by his confidence and his songs, but go up and down, and you will find new pleasures that present themselves on every side, and offer to your mournful spirit sweet consolation for the departed joys of summer.

How very clear and bracing is the air. Let Italy boast of her sunny skies and mild atmosphere, I think nothing can excel the weather we have in some days of early autumn. Now, far distant objects can be distinguished, that have long been enveloped in obscurity. The summer flowers that smiled on us in our summer walk, are, for the most part, faded and gone,—but the golden rod is still growing along the edges of the walls and the wayside; these still greet the eye as we look over the brown fields, and their presence assures us that winter is not yet upon us. The tall and stately sun-flowers still nod their heads in the passing breeze, in the corners of the garden, as if defying the cold and frost that have laid their kindred low. And now and then a modest little violet peeps forth from beneath the leaves that have almost covered it. In the summer, we passed these flowers by unheeded, in the dazzling array of beauty that met us at every step, but we now welcome their presence, as one turns to the friends that do not flee at the approach of tribulation.

Most of the birds have departed on their annual journey, while others are preparing to follow, and are daily seen drilling their forces for the sunny South. As the cold approaches, their numbers lessen, whilst occasionally is heard the short, im-

patient twitter of some bird who is fearful he is left behind his brothers.

The sturdy husbandman is busy in gathering in the fruits of his labors. All is busy activity in storing up the fruits of the earth for the coming winter. How still the woods are. I only hear the distant, happy laugh of little children, who are out a nutting, and the cheerful chirrup of the industrious squirrel, who is laying in his stock of provisions for the coming winter. Loads of the bright and golden corn are on the way to the barn, and the old cider-mill is merry with the voices of those who are engaged in the pleasant task of making cider. Occasionally is heard the whistling of the wind, as it sweeps over the deserted corn-field and harvested fields, which reminds us of the gleaming fireside, of pleasant conversation, crackling of nuts and sparkling cider. The cattle roam over the sere fields, or lie basking in the warm sunshine of noonday, on the lee side of the walls, and as they wend their way homeward at nightfall, they cast lingering looks to the well-filled barns, from which their wants will be supplied, when the cold weather and frozen ground cuts off their subsistence in the pastures.

How splendid the woods look now, dressed in their gorgeous colors! What can be more splendid? Every color and hue imaginable is here represented. But they are too beautiful long to last, and soon the wind will strip them from the tree where they have made pleasant shade and shelter to the flocks and the passing traveller. The days are growing shorter, and the farmer has now less hours to labor in the field, and more to spend by his own fireside with his family, and in social conference with his neighbors. Everything about us denotes glad fruition. The gathered crops, the merry husking, the fattening swine, all suggestive of the end of the labors, excite grateful emotions in the heart of the husbandman. How happy is the man who can look with pleasure on his past labors of the fields and the garden, and forward to a season of comparative rest, when he can improve his mind and lay his plans for the ensuing year. That such is the happy lot of many of the subscribers of the *N. E. Farmer*, is the sincere wish of

FREEMAN.

THE CHECK REIN.

Who beside the British use the check rein, saying their general imitators, the Americans? The French do not use it, the Germans do not, the Indians and Spaniards of South America, who literally live on horseback, and are perfect horsemen, do not, the Spaniards of Europe do not, nor do the Turks. The most observant and most natural people in the world are free from this error. It is strange to us, that the English and ourselves did not, years and years ago, reason upon the constantly witnessed fact that when a check rein was loosed at a tavern-stoop or in a stable, the poor horse always stretched out his neck and hung down his head. That was his language for saying that the strap hurt and wearied him, and that he was heartily glad to be relieved from it.

The genius that first proposed the mechanical feat of lifting himself up by the breeches, must have been the author of the theory that the check-rein held the horse up and kept him from falling. The mechanical action in the two cases

must be precisely the same. If the reader will reflect for a moment, he will see that no suspending power can be derived, except from without the animal.

The check-rein should be abolished. It wastes motive power. Its use is unhealthy for it disturbs the otherwise naturally and equally distributed vital forces. It shortens the life of the horse. It diminishes his speed, and lessens the free and quick action so essential to the animal's safety and that of his driver.

Brethren of the press, let us emancipate the horse from the British check rein.—*Buffalo Democrat*.

For the New England Farmer.

DEEP AND SHALLOW CULTURE FOR CORN.

I notice that a correspondent of the *Farmer* recommends four inches as a sufficient depth to plow, where Indian corn is to be planted. I hold this to be one of the most valuable crops grown in our climate, and should be sorry to have it misplaced in a soil too shallow pulverized to aid its growth. After many years experience of its culture, I think *eight* inches depth of plowing will be better than four, provided sufficient fertilizers are applied; and no man may expect a fair crop without such application.

I remember to have heard, when a boy, of two farmers travelling together from Massachusetts over the plains of Nashua, N. H., when they saw a man engaged in planting corn on the plain lands of that town. They spoke to the laboring man, and one of them inquired what crop he expected to realize on that land. The venerable man reverently replied, "With the blessing of heaven, ten or fifteen bushels to the acre." The questioner rather harshly exclaimed, "*Give me a good shovel-full of dung to a hill,*" this is the best blessing that I want."

How much labor is lost every year on our farms, by neglecting the preliminaries for insuring a crop. Our lands that have been long cultivated are not fit to be planted with any crop, without being thoroughly pulverized, and liberally fertilized. The man who presumes to plant without attending to these pre-requisites greatly mistakes his own interests.

ESSEX.

Nov. 1, 1862.

ANIMAL INSTINCT.—I knew of a jackdaw that often used to eat the gum that exuded from plum trees, and always did so when it was unwell. In connection with this subject, it may well be mentioned that a careful observer would find himself repaid by watching the modes of care employed by sick and wounded creatures. We all know that the dog and cat resort to grass when they feel out of health, and hares to a species of moss. I was told, on the authority of an eye-witness, that a goldfinch which had been struck by a hawk and wounded, made its way to a dry puff ball, tore it open with its beak, and dusted the wounded shoulder with the spores, thereby stopping the effusion of blood. The spectator was greatly surprised at the incident, and being induced to try the same remedy upon a wounded finger, found that the experiment was completely successful.—*Routledge's Illustrated Natural History*.

BUSINESS IN WAR TIMES.

The *Bangor Times*, in a recent issue, had some sensible ideas in relation to the prosecution of general business, or the carrying out of the public enterprises in war time. We ask the especial attention of every reader to these appropriate remarks. So far as the common business of life is concerned, in its thousand forms among us, all we need is *confidence in each other*. Stop importations of all articles of luxury, so as to stop the demand for gold to send abroad, and then our currency, whether of gold and silver, or paper, will have a steady value, and the prices of articles will have as little fluctuation as they have heretofore. All we need is, *confidence in each other, and confidence in the government*, that it will faithfully discharge its obligations to the people. Let us, then, one and all, cultivate this confidence, and press on, not only to complete the plans already made, but to initiate others that shall introduce new elements of industry and prosperity.

He who stands idly by with folded hands and a doubting, halting heart, is a coward, as such conduct leads directly to the loss of everything which we have so nobly gained,—name, nation and prospects,—and would result in reducing us to subjection to an unprincipled oligarchy, which would introduce slavery, and wailing and woe all over our fair and beautiful land.

Let us, then, we ask again, have confidence in the government and in each other. Our soil does not withhold its bounties, nor our sons and daughters their industrial labors, and the Lord of the harvests is ready and willing to give the increase to intelligent and faithful application. No matter what amount is demanded for the army and navy, in addition to that required for home consumption, if we are courageous, faithful and industrious, we can *reproduce*, annually, to supply the demand to any extent that supplies may be exhausted.

In this respect, we are the favored nation of the world. The monstrous waste occasioned by the rebellion, the withdrawal of hundreds of thousands of productive laborers from our farms, and the constant demand from abroad, does not exhaust the vast granaries of their means of support.

And so of the mechanic arts. The opening of the rebellion found us utterly incapable either of assault or defence. Our arsenals had been stripped of arms and ammunition. Our ships of war—what few were afloat—had been ordered into foreign seas; two only, the *Brooklyn* and *Harriet Lane*, remaining on a coast stretching along the Atlantic border for two or three thousand miles. And this was not all. The high officers of the government, the faithless and perjured wretches, who had sworn upon the altar of God to preserve

the Constitution and the laws, with one hand upon the Bible swearing allegiance, were throttling the nation with the other, in the corruption of the officers of the army and navy, and in reducing the power of the free States by every means which a most ungodly ambition could devise.

This state of things seemed necessary to arouse the energies of our too confident people in the free States. And it did arouse them. See what they have done. The civilized nations of the world are astounded with a knowledge of the extent of our resources and the industrial energy and skill of our people. It is almost as though the fiat of Heaven had gone forth and covered the broad lands with bristling bayonets, with thundering cannon, with the tramp of mighty war horses, and more than half a million of men, ready to sacrifice everything but liberty and the free exercise of our holy religion, to quell and quench the cause of all this woe—human slavery.

And the same mighty energies have been displayed in regard to the navy. It is scarcely more than a twelvemonth when the pennant of an American war vessel could rarely be seen in the Atlantic seas, so thoroughly had the right arm of our power been reduced by the shameful treachery of high officials of the government. But, lo! the change! Our naval vessels now number some four or five hundred, and are staunch, strong and well appointed, with hearts as courageous as ever beat on decks of oak or iron! Of this number *twenty* are *iron-clads*, already afloat, and *thirty-seven* iron-clads in a great state of forwardness, soon to hover over every coast of the enemy, to visit every river, bay and inlet, and to bring back to obedience and duty, every fort, arsenal and people, and tear away the black flag of slavery and rebellion from this fair and glorious land!

Confidence, friends, in each other, is all we need to make us still prosperous, and to avert, as far as possible, the real evils that visit us all, springing out of a wicked and mad ambition. Words alone, even though they may be, as Luther said, "half-battles," will not answer now. We must have systematic, energetic and persistent *action*,—action that will produce all that is demanded by the exigencies of the times, and bring our insane brethren to obedience and duty.

But we are keeping the reader too long from the excellent views which have suggested the above remarks. They are as follows:

Many people seem to suppose that because we have a great war upon our hands every one must stand back and look on as an inactive spectator—that he must enter into no speculations and exhibit no enterprise. This is an erroneous idea, and should be corrected. There are serious duties for those who remain at home. We must keep up and if possible increase our usual spirit of business enterprise, so that we may be able to

sustain those we send to the field. We owe it to the country and to our soldiers as well as to ourselves, that we be active and vigilant in all that shall help to sustain the business prospects of the country. There never was more money in circulation in the country than now, and business need not be allowed to suffer seriously for want of support. The trouble is, that attention being withdrawn to the movements of the armies, immediate business and social enterprises are neglected in proportion. We are all engrossed with the one idea of the war, and our energies are suffered to lie dormant. Retrenchment in private and public amusements is commendable and highly proper at this time. But there is danger that our people will run into the extreme of unthriftiness, losing confidence in all enterprises of a private nature, and then, that we shall lose confidence in the national ability. It does not take long, when once a people get started on this down grade, to ruin a State by universal private doubts and dejection. We repeat, we who remain at home have our duties to perform, serious duties, too. Upon us devolves the burden of sustaining this war by all the material aid at our command, and all that private enterprise can possibly produce. It is the business of communities that goes to make a nation strong and durable, in war as well as in peace, and this community has only to sustain its usual reputation of thrift, to do its share in giving confidence to the affairs of the country.

KILLING RATS---A NOVEL TRAP.

The premises of a good many farmers are infested with rats, and we are often asked for modes of destruction. A resident of Brooklyn is vexed with an increasing family of rats that seem to grow fat on arsenic and rat exterminators. He doesn't like rats, and refers his case to the *Sunday Times*. That journal recommends a trap made as follows:

"Take a mackerel barrel, for instance, and fill it to about one-third its height with water. Then place a log endwise in the water, so that one end of it will just remain above the surface. Make the head of the barrel a little too small to fit, and suspend it by two pins to the inside of the top of the barrel, so that it will hang as if on a pivot and easily tip by touching either side. On this head, thus suspended, secure a piece of savory meat. The first rat that scents it, will, to get the meat, leap on the barrel head. The head will tip, or tilt, precipitate him into the water, and resume its position. The rat in the water will swim to the log, get on the end of it, and squeal vociferously. His cries will bring other rats, all of whom will be tilted into the water, and all of whom will fight for the only dry spot in it—viz., the end of the log. As only one rat can hold it, the victor will drown all the rest, and can, in the morning, be drowned himself. We have seen twenty rats caught in one night by such a trick."

RELIEF OF NEURALGIA.—As this dreadful disease is becoming more prevalent than formerly, and as the doctors have not discovered any method or medicine that will permanently cure it, we simply state that for some time past a member of our family has suffered most intensely from it, and

could find no relief from any remedy applied, until we saw an article, which recommended the application of bruised horseradish to the face, for toothache. As neuralgia and toothache are both nervous diseases, we thought the remedy for the one would be likely to cure the other, so we made the application of horseradish, bruised and applied to the side of the body where the disease was seated; it gave almost instant relief to the severe attack of neuralgia. Since then we have applied it several times, and with the same gratifying results. The remedy is simple, cheap, and may be within the reach of every one.—*Laurensville Herald*.

A NEW BUTTER-WORKER.

We recently saw an invention by Mr. GEO. W. PUTNAM, to separate the butter-milk from butter, which appeared to us to effect the object in the most effective manner. It is simple in its construction, not expensive, and very easily managed. We saw some dozen pounds passed through, and on examining it with the aid of a magnifier, could not detect any buttermilk left, or any injury to the grain. If this proves to be the general result—as it is stated to be by the inventor—the invention will be one of great value. It is said by those best qualified to express an opinion, that only one-tenth part of all the butter brought into Boston market can be included in the class of *very good* butter, or what is called *first-rate* butter.

This great defect in an article so generally used, and one which has come to be considered one of prime necessity, is principally owing to the butter-milk left in it at the time of making. It is, indeed, as all butter-makers know, a somewhat difficult matter to remove it thoroughly; it is hard work, and too often required of women who are overburdened with cares. Under such circumstances, the work is often imperfectly done, and the result is, that a very large proportion of the butter is unfit to eat. We think the use of this machine will prove a remedy for this defect.

We have not learned where it is to be sold, or at what price.

A FINE SEEDLING PEAR.—We have received, from our old friend and correspondent, Dr. S. A. SHURTLEFF, of Brookline, a seedling pear raised by him, to which he has given the name of the *President Pear*. The tree upon which it grew is now twelve years old, and bore for the first time this season, producing about a peck. The fruit is quite large, of the turbinate, or top-shaped form, stem slender, and half an inch long. The flesh of this was fine, juicy and high-flavored, and we think it will be a valuable acquisition to our present list of good pears. We learn that the Doctor has now some twenty seedlings that have fruited, ten of which are good, and five or six of the ten of a decidedly superior character.

FOOD.

QUALITIES AND CHANGES REQUISITE TO HEALTH AND STRENGTH.

Last week we gave a few extracts from a paper with the above title, by Prof. L. C. LOOMIS, in the Patent Office Reports for 1861. On looking over the paper again, we are so impressed with the justness and importance of the things stated, that we are induced to begin with the writer and present such portions of his able paper as we think will be profitable to the readers of our columns. He says:

In discussing this subject we shall consider—

1. What the human system requires and what nature supplies;
2. The changes required by the change of seasons; and
3. Unripe and decaying food.

The two prime physical necessities of man are food and clothing. These vary chiefly according to the circumstances of latitude, or what is equivalent, temperature.

Without entering upon the question whether the earth was made to correspond in its changes, temperature and productions to the nature and wants of man, or man to the condition of the earth, it is sufficient for us to know that not only does such adaptation exist, but that the measure of its perfection is the measure of our physical perfection, and consequently, of our physical enjoyment.

To a large extent this harmony already exists in the natural condition of the lower orders of animals. Food and clothing are with them what nature provides. This is ordinarily sufficient for their life and comfort; but when it fails they are endowed with no intelligence or power to create other supplies, or to arrest or avoid the death that must of necessity follow.

In the case of man, as he is designed to inhabit, it all portions of the earth, from the frigid to the ultra torrid, he is designedly adapted partially to all climates and fully to none, the completion of this adaptation as may be required being left to his own higher intelligence. To a limited extent he is made the judge of what, in every variety of season and circumstances, will contribute to his health and comfort. It is reason enough for an animal to eat that it has an appetite and finds what will appease it, and as an almost unvarying law, such food is adapted to and was intended for that animal. Its taste, being circumscribed to a limited number of qualities, is exact and decisive. With man this general law of nature is subject to certain limitations, upon the correctness of our determination of which depends much of our physical comfort and enjoyment. That our taste does not reject a substance does not constitute a sufficient reason that it is proper food.

In the animal economy there are three essential sources of demand for new material:

1. To restore the loss consequent upon the natural wear.
2. For the production of strength.
3. For maintaining vital warmth.

But though these separate wants are indicated indiscriminately by the sensation of hunger, yet so distinct are they that those substances which

may most fully respond to one may not afford any element for the others.

Muscular effort involves the expenditure of nervous force and of the substance of the muscle itself, and consequently necessitates a restoration of each. The abstraction of heat requires a new supply of fuel. But that which may yield heat in the animal system may yield neither muscle nor nervous energy.

A substance to be nutritious must yield to the digestive forces some element that is needed in the system. It may and in a few instances does several; but if it bestows none, then it is absolutely useless in the animal economy. On the other hand, any substance that readily supplies the system with whatever is being continually consumed becomes of essential value, even though, from its inability to supply all the demands, it cannot sustain life.

The demands of the system being numerous and variable, and each article of food yielding but a few specific elements, it follows not only that there must be some variety, but that, to be productive of health and strength, this variation must correspond precisely to the fluctuating condition of the system.

But as the wear of the frame as well as the expenditure of the strength and nerve power in any individual case may be assumed as quite uniform, and the demand in these respects nearly constant, while every month brings a temperature unlike the preceding, it is manifest that the chief changes required in nutrition are those to adapt the system to the great annual change of temperature.

I.—OF THE TEMPERATURE OF THE HUMAN BODY.

While the external temperature varies more than a hundred degrees, the thermometer indicates that in health the blood keeps invariably at the same degree of heat. Neither the prostrating heat of summer nor the benumbing cold of winter reaches the animal, vital warmth. This fact, which is more or less well known, is generally accounted for upon the vague but erroneous impression that a living body has some mysterious power of preventing itself from losing its heat. The power of a living body to generate heat or to preserve it is no greater nor more mysterious than that of a stove. When the fire is once started, each will keep warm so long as there is a supply of fuel and no longer. The one is combustion with flame; the other, combustion without flame. Chemically considered, the processes are not only similar, but identical; the material consumed, the chemical action and the results of the combustion being the same. Heat can no more be generated in the animate body without the consumption of fuel than in the inanimate. The living organization must, then, in the cold season consume, and therefore by some means be supplied with a large amount of fuel or heat-generating food, in addition to that needful for sustaining health and strength in the warm season.

Having, then, the facts that the wants of the system in respect to the calorific or heating element are variable, and that the various articles of nutrition are equally or more variable in their supply, it will be readily inferred that these inequalities are intended the one to meet the other; that calorific or warming food is intended for win-

ter, and non-calorific food for summer; and not only so, but that the heat-producing food in the season of already oppressive warmth must prove injurious, and that the non-calorific must be exhaustive and insufficient in the winter.

But before we can properly enter upon a consideration of the changes in food required by the change of temperature, it will be necessary to examine the chemical composition of food in general.

II.—OF THE CHANGES IN FOOD REQUIRED BY THE CHANGE OF SEASONS.

Thus far our inquiries in regard to food have been limited to the question of the ordinary and constant demand for healthful growth and action, and to the proper supply. We are now prepared to enter upon the consideration of the extraordinary and fluctuating demands arising from the change of seasons.

The great heat-producing agent in the animal economy is carbon, aided somewhat by hydrogen. In the union of these elements with oxygen heat is evolved, sometimes with a flame, as in the case of burning wood, and sometimes without, as in the case of most chemical action. What, therefore, is needed in the animal economy for the production of heat is a supply of carbon, hydrogen and oxygen.

Recurring to the former table [which we have omitted] of the proportion supplied by vegetables, we find an average deficiency of ten per cent. carbon, eight hydrogen, and an excess of seventy-seven in oxygen.

Having thus already a large amount of oxygen in the system unexpended, we have now to look for substances containing a relative excess of carbon and hydrogen.

Let us examine the fatty substances. The proximate elements in the oils, lard, beef and mutton suet, are oleine, stearine and margarin, of which the proportions are:

	Carbon.	Hydrogen.	Oxygen.
Margarin.....	46	46	7
Stearine.....	47	47	6
Oleine.....	46	44	8

The different degrees of hardness in different fatty substances arise from variation of proportion in the mixture, a preponderance of stearine giving more solidity, and of oleine an opposite quality. But whatever may be the proportion, the elements are so slightly varied as to make no appreciable difference in our present estimate; and we may hence take the average as the composition of oils, butter, fat meat, suet and pork. This gives in fatty substances 46 carbon, 46 hydrogen, 7 oxygen; reduced to weight, carbon 723, hydrogen 122, oxygen 155 pounds in a thousand.

Having already 168 pounds excess of oxygen in the previous nutrition, we have, as fuel, 723 pounds carbon, 122 hydrogen and 323 oxygen.

To consume this amount of carbon and hydrogen requires about 2000 pounds of oxygen, a quantity much greater than ordinary food can supply.

Respiration here meets nutrition and restores the equilibrium. The air drawn into the lungs freely imparts its oxygen, which combining with the carbon and hydrogen, forms carbonic acid and water, to be expired in turn—an interchange of

elements too familiarly known to need further remark.

The facts, then, thus far seem to be:

1st. That fatty substances are the great source of animal heat.

2d. They are, properly speaking, *fuel* rather than *food*.

3d. The demand being suspended in summer, their presence in the system can only be detrimental, either from over heat, if the combustion necessary to their elimination goes on, or from debility of the surcharged organs, if it does not.

These deductions of science are fully corroborated by the indications of nature.

1st. As a general law, fat accumulated in animals in the fall, is consumed in winter, leaving them thin or lean on the approach of warm weather.

2d. The time of man's laying in his store of winter subsistence is precisely that of the fatness of animals.

3d. The appetite or relish for animal food increases in the fall, continues during winter, and passes away on the approach of summer.

4th. Milk and butter are most abundant, and of best quality, in the fall, the butter of spring being distasteful, and the milk mostly needed to supply the young of the animals.

From these considerations we conclude:

1st. That in cold weather fat is not only a proper but a necessary article of food.

2d. That lean meat and vegetables having a much inferior heat-sustaining power, a due amount of fat is the cheapest food for winter, especially for those much exposed to cold.

3d. On the return of summer its use should be discontinued, as being both needless and injurious.

4th. In all inflammatory diseases, milk, butter, cakes and pastry made with butter or lard, and fat meats, having, from their heating powers, a tendency to increase the inflammation, should be entirely discarded.

Having examined the requirements of food necessary to enable the system to meet the increasing cold, we are the better prepared to understand what may be necessary to prepare the system to meet the alternation of heat.

Whenever the temperature daily increases or decreases, so that the system is more and more taxed to maintain its exact equilibrium, additional material will be required, of one kind or other, as the case may be, to sustain this new expenditure of vital force. In the autumn we found a special supply and a correspondent appetite. In spring we may justly look for similar indications in both external nature and ourselves. As the one was food of calorific properties, so the other should be food of a cooling nature.

The productions of spring and summer are salads, fruits, vegetables, and the cereals, of which the two latter classes ripen so late as to bring their consumption in the cool rather than the warm season, leaving as the productions of the early summer only the salads and fruits.

Salads can hardly be considered as nutritious productions, but as they are the first departure from winter food, and are, therefore, the precursor of the more general change to follow, they cannot be omitted. We shall include under this

well as salads proper, both being the early shoots or foliage of any innoxious vegetable—eaten raw, if tender and tasteless; otherwise, boiled, to soften its texture and remove its unpalatable juices.

Salads consist of little more than uncompacted cellulose, the various oils and acids peculiar to each plant not yet having been to any extent elaborated. The first thing to be remarked of the whole class of salads is, that they are seldom eaten without vinegar. Indeed, it is questionable whether the vinegar is not essential to a salad—whether most salads without the vinegar would not be rejected by the taste. At all events, taking salads as universal taste constitutes them, acid must be considered as a constituent. We have, then, cellulose, acid, and not unfrequently a little sugar added—a compound so nearly resembling *fruit* as to lead to its examination before proceeding further.

FLOWER-GARDEN IN NOVEMBER.

In November, in our latitude, the flower-garden is not very attractive. Flowers are few in number, and those few look pinched and cold. The pleasure of cultivating them is over for the season, unless, as every lover of flowers will do, a few of the favorite plants have been selected for in-door culture during the winter. Many persons, particularly those somewhat advanced in years, find more actual enjoyment with their plants in winter than in summer; for in winter they are cultivated in comfortable rooms, with no damp ground under foot to suggest unpleasant thoughts of colds and rheumatism.

The work out of doors this month will consist in planting spring bulbs where this has not been performed sooner; in preparing the borders for another season by digging and manuring, being careful to leave the earth rough and loose for the frost to operate upon during the winter; in transplanting hardy shrubs and perennials; in taking up and potting tender roses, and attending to multitudes of little odds and ends, which will always present themselves at this season.

Plants in the house will need but little care at this season. Most of them are in a state of rest, not yet having commenced their growth to any great degree. At such times, water must be sparingly given them. While in this state they should also be kept as cool as possible, waiting until they have made some progress in growth before bringing them into a warmer atmosphere.

I have generally observed that where ladies have the exclusive care of plants, they are not usually cut back sufficiently when potted, many being left exactly as they were in the ground. I presume this is on account of their tender-heartedness, which will not allow them to hurt the poor things by so severe a process. But whatever may be the reason, whether this, or because they wish to save a few flowers, it is a mistake in every respect, for the plants will grow better, bloom better, and be more healthy where vigorous pruning is adopted, than when the shoots are left long and straggling.

Sticks which have been used for tying plants to in the garden should be gathered up, tied in bundles, and laid away for another season. Dahlia roots should be labelled, packed in sand, and kept

TAN BARK AS A FERTILIZER.

I am a tanner by trade, though my attention now, and for the past ten years, has been given exclusively to agriculture. When engaged in tanning, one of the most annoying matters connected with it, was the disposition of the spent tan bark. A large stream at no great distance from our tannery received the principal part of it, while the balance was spread over the roads, rendering them almost impassable in wet weather. We were always glad to have persons cart it away, and were ready at any time to assist in loading their carts and wagons. This went on until I left the tannery, when it occurred to me that a better use might be made of it than to cart it to the creek, give it away to the neighbors, or spread it over the roads. I resolved to try an experiment, the details of which I will give you in brief:

I carted about one hundred loads of spent tan bark to my premises, over which, I spread at intervals, all the refuse lime from the tannery, together with about one hundred bushels of caustic lime from the kiln. I then allowed it to remain in that condition about six months, when I cut it down with digging forks, mixing the whole thoroughly. Three months from that time I applied it to a field of three acres, spreading it over the surface before plowing. The soil was a stiff clay, which had always been very hard to work, and had never yielded well. It was seeded with wheat, and produced twenty-four bushels to the acre. The clover crop which followed it was as fine as could have been desired, turning off more than two tons to the acre. The next season it was plowed again and put in corn, yielding a very handsome return. The only manure the corn received was a handful of ashes to the hill at the time of planting. The field is now in wheat, and looks well after an application of farm-yard manure.

I observe that the soil which was formerly stiff and hard to work, is now friable, and pulverizes much more readily than before the application of the spent tan. How much of the productiveness and easy working of these four acres is attributable to its application, I leave your readers to determine. My own impressions are, that a vast amount of most valuable material is annually lost in the shape of spent tan. I shall use it again, being entirely satisfied that it is valuable when used properly, and especially upon stiff soils like mine.—*Farmer and Gardener.*

CURING PORK.

A French chemist has lately asserted, that scurvy will never arise from the use of salt provisions, unless saltpetre be used in the curing; that salt alone answers all the purposes, provided the animal heat be entirely parted with before salting. He claims that the insertion of pork in pickle alone is not sufficient, but that it should be rubbed thoroughly with dry salt after it has entirely parted with its animal heat, and that then the fluid running from the meat should be poured off before packing the pork in the barrel. This should be done sufficiently close to admit no unnecessary quantity of air, and some dry salt should occupy the space between the pieces, and then pickle, and not water, should be added. Great care must be taken to fill the barrel entirely full, so that no

portion of the meat can at any time project above the surface of the fluid; for, if this occur, a change of flavor ensues such as is known with rusty pork.

The pickle, of course, must be a saturated solution of salt and water, that is, so strong that it is incapable of dissolving more salt. It must be remembered that cold water is capable of dissolving more salt than hot water.—*Working Farmer.*

For the New England Farmer.

HUNTERS.

BY R. F. FULLER.

So long beside that sunny stream,
Who gazes in its brimming gleam?
That mirror all, or naught, displays,
According as the eye surveys.
It may, like the enchanted glass,
Make wonders in its picture pass.
The thoughtful, in its deeps, may find
Time and eternity, combined.
As this repeats the sky, below,
Its counter through the heart may flow—
River of peace, serenely fraught
With golden sands of sunny thought;
A Pactolus of precious treasure,
Pure, tranquil and ideal pleasure.
The river may be such, we know,
With full and meditative flow;
Or, it may nothing be; as they
The mirror element survey.
It copies and projects to view
The soul, such as it is in you.
An empty mind its mirror reads,
In muddy bottom, grown with weeds.
And there discerns the aimless eye,
A lazy cloud, waft idly by.
To childhood's look of innocence,
The azure clear it represents;
And shows the sunny heaven's smile,
For Israelites, who know no guile.

—What views this man, there? Can you tell?

My life! It is a pickerel!
I did not see his pole, before,
A thread of shadow reaching o'er.
Well! he, too, on his likeness looked:
And here, at last, he hath it, hooked!
Both man and fish are hunters—they
Have each their own peculiar prey.

This man must be the same, I saw,
Where I was little looking for;
Some days since, in a wood withdrawn,
Where I for solitude had gone,
'To hunt impressions, fancies, moods,
And influences, in the woods.
Such shun, now, cities, villas, lawns;
And hide in forests, with the fawns.
I find them there, abundant game,
But little hunted, too, and tame.
And I was having, on the day
I speak of, great sport, in my way;
For I had quarried, caught and hit
A bag-full, with the shafts of wit!
—But I was startled, and turned back,
By a sharp rifle's sudden crack!
'Twas "all day then with me;" for lo!
Away my thoughts and fancies go;
And, I imagine by the flight,
They will not, very soon alight.
Now, who, I thought, is sporting here?
This hunting-ground, 'tis very clear,
Is not for both—one doth intrude
And trespass on this ancient wood.

What shall I do? If we dispute,
Though I talk best, the man may shoot,
And, if the fallen creature should
Find I'd a fancy for this wood,
He might conceive a fancy, too,
As tough wills, when you drive them, do.
No! I must, with my ready wit,
More certain than his rifle, hit!
I'll beat before him, in the van,
And give all warning of the man,
Except the hunter.

So, I scare

Quail, partridge, rabbit, cowering there.
And thus my friend, the sportsman, got
Nothing, but tired of the spot.
No more of game he caught, that day;
And, by-and-by, he went away.
And then, I came upon him; and
Bid him good day, and shook his hand;
Designing him to closely scan,
And in my fancy catch a man!
—And so I did; he proved to be
The best of game, that day, for me.
An ancient hunter—all the ground
And streams he knew, for miles around,
And, though he saw there but the real,
Nature had shaped to her ideal
His manners, which expressed her well,
As once did Wordsworth's "Peter Bell."

COMPOST FOR PEAR TREES.

For those who have a poor soil, or those who are desirous of making the culture of pears a special object, the compost described below will be valuable. Take of vegetable muck, one cord; stable manure, half a cord; wood ashes, ten bushels; and, if it can be obtained, twenty pounds of horn shavings; add to these two bushels of crushed or ground bones, and from two to three bushels of charcoal, reduced to a fine powder, and two of plaster.

The ingredients should be intimately incorporated by frequent stirrings, and kept moist by daily effusions of urine, mixed with the wash from the sink or laundry. This compost is highly stimulant in its effects, and when applied to trees, causes a rapid and healthy development. The above quantity will be sufficient to manure from fifty to seventy-five trees. It should be applied in the fall, and thoroughly mixed with the soil, and then the trees mulched in the spring.

HEALTHFULNESS OF APPLES.

There is scarcely an article of vegetable food, says *Hall's Journal of Health*, more widely useful and universally loved, than the apple. Why every farmer in the nation has not an apple orchard, where trees will grow at all, is one of the mysteries. Let every family lay in from two to ten or more barrels, and it will be to them the most economical investment in the whole range of culinaries. A raw, mellow apple is digested in an hour and a half, while boiled cabbage requires five hours. The most healthy dessert which can be placed on a table is a baked apple. If taken freely at breakfast, with coarse bread and butter, without meat or flesh of any kind, it has

an admirable effect on the general system, often removes constipation, correcting acidities and cooling off febrile conditions more effectually than the most approved medicines. If families could be induced to substitute the apple—sound, ripe and luscious—for the pies, cakes, candies and sweetmeats with which their children are too often indiscreetly stuffed, there would be a diminution in the sum total of doctors' bills in a single year, sufficient to lay in a stock of this delicious fruit for a whole season's use.

FLAX---FIBRILIA.

Some time since, the subject of the culture of flax to a considerable extent in the free States was discussed in our columns, but failed to excite that general attention which it seems to us its importance demands. Very few people among us at this day are acquainted with the crop, or the nature of the material derived from it, so thoroughly has its cultivation ceased on New England farms. But since the discussion occurred, the condition of things in our country has widely changed, and all are now eagerly looking for some staple that will take the place, in part or in whole, of the cotton which we have drawn chiefly from the slave States. On the eleventh of February, 1860, STEPHEN M. ALLEN, Esq., addressed a meeting in the Representatives' Chamber, at the State House, and gave much interesting information in relation to the culture of flax and its manufacture into fibrilia, and about that time furnished us with some further facts bearing upon the subject which we did not then publish, for fear of pressing the matter too fully upon the reader. As the subject has assumed a new importance, we now give what he then furnished, as follows:

If we should take from the tillable lands of each State, one-quarter, and devote it to the cultivation of flax, and estimate the product as one bale of fibrilia, 500 pounds to the acre, which would be a small estimate, the aggregate would be 16,003,809 bales, and would be apportioned nearly as follows:

Maine.....	509,899	Maryland.....	699,476
New Hampshire.....	562,872	Ohio.....	2,462,873
Vermont.....	650,352	Michigan.....	482,277
Massachusetts.....	533,359	Indiana.....	1,261,635
Rhode Island.....	89,121	Illinois.....	1,259,886
Connecticut.....	442,044	Missouri.....	754,606
New York.....	3,102,241	Iowa.....	206,170
New Jersey.....	441,997	Wisconsin.....	261,374
Pennsylvania.....	2,157,154	Minnesota.....	1,258
Delaware.....	145,215		

Total number of bales of 500 lbs. each....16,003,809

The value of this, cottonized at the mill, would be	
20 cents @ lb., or \$50 @ bale, making.....	\$800,190,450
The seed from the crop, at market, would be at \$1	
@ bushel.....	240,057,135
	\$1,040,247,585

The seed from flax will pay all expenses of cultivation, and yield a small profit beside, to be added to the value of the fibre, and feed from the straw—which, in the aggregate, will render it a profitable crop to the farmer.

Well cultivated lands will yield two tons of straw per acre, and twenty-five bushels of seed.

The seed in New England is worth \$1.50 ¢ bushel, or... \$37.50
The straw in New England is worth, unrotted, \$10 ¢ ton... 20.00

	\$57.50
If the unrotted straw is broken on the farm, two tons will yield 1000 lbs. of lintin, worth, in New England....	\$40.00
And 2500 lbs. of unrotted shives, which make the best of food for cattle.....	20.00
Seed from two tons of straw, 25 bushels.....	37.50
	\$97.50

One ton of flax straw will make 400 pounds of pure fibrilia.

From an extended experience in fibres and their growth in the United States, I feel fully assured that the North-west can produce any quantity of fibre for cottonizing which may be needed, and this branch of national industry is becoming more important every year. In fact, the traveller through the United States cannot fail to see the great influence of this branch of agriculture and manufacture upon the national government through its individual prosperity. As early as 1846, while travelling in the South, I became convinced that the question of *fibrous agriculture* and *fibrous manufactures* would yet control the peace and stability, for good or for evil, of the American Union, and in 1851, while a member of the Legislature of Massachusetts, I had the honor to write the report on flax as shown in Senate document No. 106, of that year, and stated therein the great importance of flax culture as a controlling influence upon the country—its stability and prosperity. The following is a quotation from the close of said report:

"Time and nature are constantly exerting their recuperative energies. Nations have risen and flourished, with prospects of perpetual duration, quite as well founded as those which we indulge at this moment in regard to the permanency of our own political organization; yet history, at this day, only tells us that they once existed, and that others have sprung up in their stead. Trade, and every species of human intercourse, continually undergo fluctuations; but the principle of regulation is ever at hand, to equalize and harmonize the various conflicting interests which might otherwise destroy each other. We are too often deceived into a belief that our individual or national prosperity is so unchangeably established, that there remains to us no further duty than to live on in the enjoyment of present possessions. But civilised life produces, daily, new wants, to meet which new means of gratification must be as often devised; for the sources of support, both for nations and families—as well as the character of all the wishes and demands of mankind, whether in power or in poverty, differ essentially in the present age from those of the last; and are perpetually varying and multiplying—perhaps reforming and refining—from century to century, as our race presses onward in the 'march of improvement.'"

No MAN can leave a better legacy to the world than a well-educated family.

EXTRACTS AND REPLIES.

BONES—ANIMALS—BOOKS.

I think the time has come when the farmers of New England, in order to compete with western agriculturists with their cheap and fertile lands, must begin to avail themselves of every means within their grasp for rendering their farms more productive and remunerative. It strikes the mind of the writer, that of all manurial substances, the bones of animals, and the blood of those slaughtered are the most universally neglected and wasted, while chemical analysis proves these substances to be composed of the most powerful stimulants and aliments for the growth of all cultivated crops.

Can you inform me, therefore, through the columns of your journal,

1. What is the best method of preparing bones, say to commence during the present autumn or coming winter, in order to have them thoroughly dissolved and most available for next year's crops? The method given by James S. Grennell, in your weekly of December 7th, is too slow. If the bones were ground or pounded, the action of the ashes might reduce them in two or three months instead of a year.

2. Can bones be ground in a common grist mill, or are there mills made on purpose for this work?

3. How can the blood of slaughtered animals be best saved and composted, or otherwise prepared as a fertilizer for crops?

4. How of hen manure, which I observe many farmers suffer to accumulate and be greatly wasted?

5. I wish to obtain the best work now extant on scientific farming; one that treats fully on the chemical constituents of plants and animals, with special reference to their value in the preparation of manures; perhaps some of the back volumes of your monthly *Farmer* would be just what I want. If you have preserved the back volumes through the whole fourteen years of its publication, how will you sell any or all of them?

CHARLES A. DERBY.

Leicester, Addison Co., Vt.

REMARKS.—1. *Dissolving bones.* We have a lot of bones packed in ashes about four months ago, that are now so soft as to be easily crushed by the hand. We know of no better way to accomplish the end desired than this. They should be kept in a warm place in the winter, such as the cellar. The process is cheap, easy and effective.

2. Bones cannot, probably, be ground in a common grist-mill, as the marrow and other fatty matter contained in them would soon choke the stones and render them inefficient. If bones are deprived of this matter before being ground, they are greatly reduced in value as manurial agents,—but it is possible that they are ground in iron mills constructed for the purpose. We do not, however, know any such.

3. We invite some of our correspondents better acquainted with the means of saving and preparing the blood of animals for manure, to answer the third inquiry.

4. The droppings of poultry may be saved in excellent condition, by covering them every morning with meadow muck, coal ashes, loam, or even sand. They will then be in convenient form to apply to the hills of corn or other plants in the spring. Care must be observed that they are not too strong.

5. The Farmer's and Planter's Encyclopedia, and Johnston's Elements of Agricultural Chemistry and Geology, are both excellent works. The back volumes of the *Monthly Farmer* contain numerous articles on the points you specify, and on almost all other topics of a kindred nature. The price of them is only \$1.25 per volume, or for some second-hand volumes, fifty cents per volume.

BRAHMA POOTRA FOWLS.

You will oblige me, as well as some of my friends, if you will state in the next paper where we can get the Bramwall fowls.

I have heard that there was an advertisement or description of these fowls in the paper for 2d March, 1861.

THOMAS BARNES.

Pawtucket, Nov. 4, 1862.

REMARKS.—In the paper to which you refer there is an article from the pen of Mr. JOHN S. IVES, of Salem, describing the *Brahma Pootra* fowls, which is as follows :

I have kept upwards of thirty different breeds of fowls, but have never, until this winter, found the breed that comes up to my idea of a perfect farm fowl, viz.: the pure *Brahma Pootra*, which seems to possess all the good qualities requisite to a perfect breed of fowls. They are very large, yet well proportioned, the hens weighing from 8 to 12 pounds; legs yellow, flesh fine, yellow and tender; very domestic; cannot fly upwards of three feet, therefore are not troublesome by roosting about the premises to the great annoyance of the animals, and all who may visit the barn.

FORETELLING STORMS.

The *American Railroad Journal*, in an article referring to the late disastrous rain storm and freshets in Pennsylvania and New York, says :

The science of meteorology has now arrived at such a pitch that every general violent storm, such as that of Wednesday week, can be predicted with almost absolute certainty twenty-four hours in advance. By means of the telegraph, this information might be communicated to all parts of the country in a few minutes, so that signals could be displayed along the coast, while in the interior, works could be put in a state of readiness to receive the expected visitor. Every reservoir could thus be run dry; every canal lowered; even the boatmen could be forewarned. A large number of valuable lives were lost during the late freshet, every one of which might have been saved to their own families and the community at large.

We are here making use of no reckless assertions. The experiment of "forecasting" the weather has been tried in England. It is conducted on strict scientific principles by a Depart-

ment under the supervision of Admiral Fitzroy. To defray the necessary expenses in connection with it, the British Government makes a small appropriation annually. A leading English journal remarks that this invention has already been the means of saving hundreds of lives annually. It is admitted on all hands that though Fitzroy has made frequent mistakes as to the *local* gales, yet that no great general storm has visited the country during the past year without being heralded for several hours in advance by the display of signals along the coast, warning seamen to keep off shore or not to venture out for the time being. In this country, owing to uniformity of our general coast lines, the laws of the storm will doubtless be found more simple than in any part of Europe.

AMERICA---THE GRANARY OF THE WORLD.

In his book of travels in the United States, recently published, Mr. Trollope says: I was at Chicago and at Buffalo in October, 1861. I went down to the granaries, and climbed up into the elevators. I saw the wheat running in rivers from one vessel to another, and from railroad vans up into huge bins on the top stories of the warehouses; for there rivers of food run up hill as easily as they do down. I saw corn measured by the forty bushel measure with as much ease as we measure an ounce of cheese, and with greater rapidity. I ascertained that the work went on, through the week and Sunday, day and night incessantly; rivers of wheat and rivers of maize ever running. I saw men bathed in corn as they distributed it in its flow. I saw bins by the score laden with wheat, in each of which bins there was space for a comfortable residence. I breathed the flour, and drank the flour, and felt myself to be enveloped in a world of breadstuffs. And then I believed, understood, and brought it home to myself as a fact, that here in the corn lands of Michigan, and amid the bluffs of Wisconsin, and on the high table plains of Minnesota, and the prairies of Illinois, God had prepared the food for the increasing millions of the Eastern World, as also for the coming millions of the Western. I began to know what it was for a country to overflow with milk and honey, to burst with its fruits, and be smothered by its own riches. From St. Paul down the Mississippi, by the shores of Wisconsin and Iowa, by the ports on Lake Pepin, by La Crosse, from which one railway runs eastward, by Prairie du Chien, the terminus of a second, by Dunleith, Fulton and Rock Island, from which three other lines run eastward, all through that wonderful State of Illinois—the farmer's glory—along the ports of the great lakes, through Michigan, Illinois, Ohio, and further Pennsylvania, up to Buffalo, the great gate of the Western Ceres, the loud cry was this—"How shall we rid ourselves of our corn and wheat?" The result has been the passage of 60,000,000 bushels of breadstuffs through that gate in one year! Let those who are susceptible of statistics ponder that. For those who are not, I can only give this advice: Let them go to Buffalo in October and look for themselves.

Science must be combined with practice to make a good farmer.

CORN-STALKS FOR FODDER.

There is scarcely a New England farm that does not produce more or less *Indian Corn*—a crop beautifully ornamental in the fields, and as rich and life-sustaining as it is beautiful. The farmer would scarcely feel that his harvests were complete without a bin of the golden ears. No other grain can be so universally and acceptably employed. It serves both man and beast. No bread is more gratefully received upon the breakfast table than the corn-cake, slightly crusted, orange-brown, sweet, delicious! Or the smoking loaf of “brown bread,” hot from the oven, tempered with rye meal and, if of the highest order, a portion of those yellow globes that grow near to the ground among the upright corn. Or the “flannel-cakes,” light yellow, tender, and surpassing even the best buckwheat. Or the “hominy,” coarse or fine, as fancy dictates, or the brimming dish of “hasty pudding,” like golden sands from the river, whose culinary steam encircles the great pitcher of milk standing by its side! It is no wonder that the poet could sing through many pages, of the excellencies of this rich and gladdening grain—the crowning glory of our autumnal harvests. The bosom of the farmer swells with honest pride, as, with his friends, he looks upon the ample reward of his labors in the full granaries of this bountiful crop. There seems to be no other grain which the animals that are dependent upon us so much relish as this. In a cooked or uncooked state, in the kernel, or ground into meal, it is always eagerly eaten. Horses are abundantly sustained and perform constant and hard labor upon it. With a quart per day, cows increase their flow of milk, and also increase in flesh. Fed sparingly to hogs, in connection with less nutritious food, they grow rapidly and assume large frames, and if fed plentifully in the form of meal, lay on flesh and fat at the rate of one pound to two and a half pounds per day—and they seem never to tire of it. Poultry enjoy it vastly, and will generally leave all other grain for the bright *Indian corn*! It is a universal favorite—wild animals, such as bears, raccoons and squirrels, all being fond of it, as well as the crow, blue jay and other birds.

Indian corn is, also, a pleasant and convenient crop to plant, cultivate and harvest—and when harvested, easily kept, without loss, except from unimportant depredations by rats and mice. If in a suitable place, winter's cold or summer's heat does not affect it, and after it comes from the mill and is properly cooled it may be kept sweet and good for months, if in a dry place. It is, in truth, the “staff of life,” this beautiful *Indian corn*!

But the grain is by no means its only excellence. The average product of the mowing fields of New England is about one ton of hay per acre—not more than that, perhaps a little less—while the

average product of the stalks and husks of our cornfields must be at least double that quantity—and this is a gain that is scarcely looked for in the cultivation of the crop—the eye of the husbandman being steadily on the shining grain. Nevertheless, the *fodder* of the crop is an important item, and we think is not yet properly appreciated. But in order that it shall be acceptable to stock it must be,

1. Secured with its rich juices retained.
2. Preserved from rust, mould, and partial decomposition, and
3. Properly prepared before it is laid before the stock.

In the first place, the tops of corn are too often cut and thrown upon the ground, where they remain for several days, scorched by each returning sun, and dampened by the dews of each succeeding night, or intermediately soaked by the autumnal rains. They are then tied into bundles—often quite too large—and shocked or stooked, and stand upon the ground, uncovered, through an indefinite number of weeks. At the close of this process, there can be little left that is nutritious and attractive. Nothing seems to extract the valuable qualities of plants from them so rapidly, as contact with the ground after they have been cut. What the precise process is, we are not able to say, but long observation has convinced us that such is the fact. Corn, or other plants, cut and laid upon the stone wall, or upon rails, where it is kept entirely from the ground, will retain a lively green color, and its natural fragrance for weeks longer than that laying upon the ground. This fact is probably noticed every year by hay-makers. It cannot, we think, be entirely owing to the free circulation of air about the plants that are elevated, as they are as often wet with showers or dews as those on the ground. They undoubtedly dry more readily, but that alone will not account for the striking difference that exists between them. The soil evidently has a power of securing to itself whatever of a nutritious nature comes in contact with it, and of holding it in reserve for the growth of future plants. Chemical changes, also, are undoubtedly going on more rapidly in the moist plants near the ground, than in those more elevated and dry. The first defect, therefore, in securing corn fodder, is in the slovenly and wasteful manner in which it is sometimes done.

The second is in packing away for winter use. Where fifty bushels of corn per acre are harvested, the stalks are usually rank, quite stout, and full of juice, and it is no small labor to dry such so thoroughly as to prevent rust or mould, if they are put away in large amount together. We have observed that cattle will eat corn fodder readily that is

slightly mouldy, but that may be fairly accounted for in the fact that such fodder is a little moist, and is, therefore, preferred by them to that which is dry, hard and tough. When stalks are so preserved as to retain a lively green color, and to throw off their natural fragrance when moistened, and when husks and butts retain the color they had when the corn was harvested, then they are in the best condition for fodder—are wholesome nutritious and palatable, and make an acre of corn fodder as valuable as our average acres of English grass.

The next step is to *prepare them properly* to be laid before the cattle. It is thought by many to be a wasteful practice to throw corn fodder to the cattle, and allow them to take off the husks or leaves, and reject the juicy stems. Beside this, the long stems then go into the manure, where they make it exceedingly difficult to be overhauled or handled in any way, and are usually in the spring a vexatious hindrance when labor is exceedingly valuable.

An easier and more economical process is, to run them through the hay-cutter, perhaps mingled with hay, and then moisten them and sprinkle on a little salt, and meal of any kind, or with roots chopped fine. In this way, nearly every portion of the fodder will be eaten by the stock with avidity, and they will yield a flow of milk, or lay on flesh as rapidly as upon the best upland hay. Indeed, we have known a stable of livery horses kept well upon corn fodder, with the same amount of grain that was fed to them when using English hay.

The labor of cutting the fodder will be found light, where a good machine is used for the purpose—but it should not be one of small size. With proper care it will last a life-time, with slight repairs, and a true economy will be found resulting from the process.

DRYING PUMPKINS.

We love pumpkin pies, especially when there is not an abundance of tree fruit. We have tried all modes of drying, but no plan is equal, we think, to this: Take the ripe pumpkin, pare, cut into small pieces, stew soft, mash and strain through a cullender, as if for making pies. Spread this pulp on plates in layers not quite an inch thick; dry it down in the stove oven, kept at so low a temperature as not to scorch it. In about a day it will become dry and crisp. The sheets thus made can be stowed away in a dry place, and they are always ready for use for pies or sauce. Soak the pieces over night in a little milk, and they will return to a nice pulp, as delicious as the fresh pumpkin—we think more so. The quick drying after cooking prevents any portion from slightly souring as is always the case when the uncooked pieces are dried; the flavor is much better preserved, and the after cooking is saved. This plan is quite as little trouble as the old mode,

to say nothing of the superiority in the quality of the material obtained. Try it, and you will not return to the old method, we are sure, and you will also become a great lover of pumpkin pie, "all the year round."—*Germantown Telegraph.*

For the New England Farmer.

LITTLE THINGS:

OR A WALK IN MY GARDEN.

While preparing my grape vines for winter, I was led to a train of thought arising from the articles in the *Farmer* on

AGRICULTURAL EDUCATION.

Having had something to do with teaching in almost every grade of school for many years past, I feel that the subject is one beset with many difficulties. Many of them have already been stated by your correspondents. It is the besetting sin of many teachers to have a hobby in the school-room. Now it is of the utmost importance that the teacher carry into the school-room a well balanced mind, in order to give a due proportion of his time to the different branches of instruction, according to their importance.

But few persons are aware how little individual attention the teacher can render to his scholars, and do justice to all. Now suppose a school of forty scholars be under one teacher. He must have classes in arithmetic, grammar, geography, penmanship, reading and spelling each day, in order to accomplish anything. Suppose he has three classes in arithmetic, which is a much smaller number than is usually found in our schools, two in grammar, two in geography, one in penmanship, three in reading and spelling, making fourteen different exercises in five and a half hours, giving twenty minutes to each class. But then there must be a portion of time allotted to assisting scholars in arithmetic and to other matters in the school, such as its discipline, and perhaps some higher branch of study is introduced, so that classes rarely receive so much attention at each lesson. This individual attention must be regarded, or the scholar will feel neglected, and complaints will be entered against the teacher. Now, what one of the studies would parents be willing, or which should be struck out of the school-room? I have only supposed that scholars read and spell but once in a day, whereas they are usually expected to read and spell at least twice a day, especially the more juvenile members of the school.

There may be cases in which agriculture might be introduced into the common school, but I think they are rare. A teacher may often introduce something incidentally into his school that will be of great value to his pupils. I have often done so. This very term I have given a course of nearly forty lectures to a class of boys on mineralogy and geology. Each boy has his note book, and takes down the most important part of the lecture, examines the specimens and collects a cabinet of his own, which he carries home with him in vacation, and which he prizes highly. These lectures are not more than fifteen minutes long, and are given out of the regular school hours, but they are such as unfold to them a vast amount of useful information. They become familiar with the composition

of rocks and soils without any interference with their regular studies. To them it is a pastime. Now the same method may be adopted in agriculture, when there is an *opportunity* to do it. I have adopted the same plan on other subjects, and have found it to work admirably. Some of your most popular Boston teachers have in years past received my instruction in this way with not a little pleasure and profit to themselves.

Sometimes a school may have a class of scholars who can study chemistry, natural philosophy, physical geography, or some other higher branch, with great advantage. At other times it would be impossible to do anything of the kind. I am not now speaking of graded schools in our villages and cities, but of those found in rural neighborhoods among the farmers. The truth is simply this. It is as much as the teacher can possibly do to give sufficient instruction to meet the intellectual wants of twenty scholars under his charge in the studies usually taught, so as to keep their minds vigorously employed and keep them out of mischief. Advanced studies must generally be attended to in the higher graded schools, and any young man who has ambition enough to study them, can, in this country, find some place where he can gratify his inclinations. The common school will become more and more elevated, but it must be the elementary school to a large portion of our youth, and elementary studies must occupy the greatest portion of the teacher's attention. I would gladly see agriculture taught wherever it can do any good, but I think that we teachers, who are compelled to give instruction in grammar, arithmetic, geography, reading and spelling every day, have but little time to devote to agriculture in school or out.

N. T. T.

*Highland Boarding School,
Bethel, Me., Nov. 1st.*

AN ICE PALACE ON THE ST. LAWRENCE.

Mr. Edward Hassel, a Berlin architect, who was employed for a number of years on the Petersburg and Moscow Railway, and constructed many of the far-famed ice palaces of St. Petersburg, proposes constructing an ice palace on the river opposite this city next winter, if he can meet with sufficient encouragement from the citizens. The building will be 40 feet high, 114 feet long, and 56 feet deep, and constructed much in the same style as the Court House, but with this addition, that it will be surrounded by a colonnade and topped with a dome, all, with the exception of the windows and doors, to be built of ice. A large skating ring will be annexed to the building. The rooms, which will include a large ball-room, ladies' and gentlemen's rooms, halls, &c., will be all heated by stoves, and warranted not to melt! Mr. Hassel says that the climate is peculiarly adapted to the erection of such buildings. He may well do so. And that the palace would be built in three or four weeks at a cost of \$3,500. This sum he proposes to raise in subscriptions of \$10, which will entitle the shareholders to have exclusive control of the building. A building of this nature would attract large numbers of visitors to the city. The hotel-keepers and other interested parties would, therefore, do well to look upon the scheme with favor.—*Montreal Herald.*

EXTRACTS AND REPLIES.

THE SEASON.

Autumn, up to the sixth instant, was as fine as could be desired. Crops of all kinds ripened finely and were nearly gathered, in good condition. In the forenoon of the 6th, we had a slight fall of snow, which, in low lands, soon melted. Friday forenoon was very chilly, and the heavy clouds gave indications of a severe storm. Snow commenced falling about one o'clock, P. M., and continued, with a northeast wind, until about eleven at night. Saturday was mild, and the snow melted through the day. The storm commenced anew about midnight Saturday, and the snow fell rapidly until nine o'clock, A. M., Sunday, when it turned mist and rain, which continued at intervals until four o'clock P. M., when the wind changed to north-west, with snow squalls, continuing boisterous through the night. Monday morning, snow covered the ground a foot deep, on an average, besides snow drifts that would be in character with a February snow storm. This snow lay very solid, and the quantity that naturally fell in this storm, allowing for what melted, would not have been less than eighteen inches. Notwithstanding the heavy crops of forage gathered in, if this should prove the commencement of a winter to continue as late as the last did, there must be a scarcity before spring, as nearly every farm is stocked to its utmost capacity. The prices of wool promise so well, that every one is keeping as many sheep as they deem it possible to carry through.

Yet with the unfrozen ground beneath and genial skies above, the snow has rapidly wasted today, and we anticipate its speedy departure, and a fine turn of open weather, before the final setting in of winter. The lowness of springs and streams indicate that winter is not to come yet.

Richmond, Nov. 10, 1862.

W. BACON.

STATE BOUNTY TO AGRICULTURAL SOCIETIES.

In the monthly paper just at hand, I notice an elaborate discussion of a suggestion that I threw out a few weeks since, as to the expediency of continuing the bounty of the State to our agricultural societies—a privilege they have experienced for forty years. If these societies cannot be sustained under discreet management without this bounty, I would continue it; but if they can, it is very clear that the State will have for a long time to come other and more pressing necessities demanding its attention. I say *discreet management*, for it must be apparent to all that the moneys thus distributed to societies have often been used without sound discretion.

It is easy so to conduct exhibitions as to have them sustain themselves. A small fee of ten cents from each visitor, will give an income of \$500, when the show is held in the midst of a dense population, as all shows should be held, and this will cover all incidental expenses of the show. If the society has a vested fund, let the income thereof be paid out in premiums. If it has not such a fund, let the members thereof raise one by voluntary contribution. A payment of one, two or three dollars a year would not be seriously felt. I wish some of the leading men of the State would give their views on the subject. While we fight the rebels with a vigorous arm on their own soil,

let us look well to ourselves and our posterity at home. What is worth doing at all is worth doing with energy. I forbear to say more lest my garrulity should be too apparent.

ESSEX.

Nov. 7, 1862.

SAMPLE OF MEADOW MUCK.

I have taken the liberty to send you a sample of my peat muck, a part of it green and a part dried, having been dug more than a year. Will you have the goodness to inform me through the *Farmer* whether this sample is as good for manure as the peat muck which you have examined will average. There is a large quantity of it in this neighborhood, and our farmers now make but very little use of it. I have more than a thousand cords within one hundred rods of my barn. The meadow is very wet, and cannot be drained without too much expense. I have to cart or sled the muck off after the ground is frozen. I have a heap that was dug more than a year since, which has been mixed two months with lime slaked with strong brine, at the rate of a cask of lime to a cord of dry muck. How shall I use it, to derive the most benefit from it? Shall I spread it on my grass land this fall, or spread it on the ground in the spring, that I intend to seed down with barley, or mix it with my winter manure in the spring and apply it to my planting ground?

J. P.

South Hampton, N. H., 1862.

REMARKS.—We have examined the sample sent, and believe it to be worth two dollars per cord, on what are called light, sandy lands, and quite valuable on heavier uplands of granite formation. It appears to be of excellent quality. You cannot, probably, make any better use of that which you have composted, than to spread it on your grass lands immediately. If you cover the droppings of the cattle with it during the winter, as often as twice or three times a week, you will, in the spring, have a manure heap that will offer a good example for all your neighbors to imitate, and one which will essentially assist in covering your fields with the most productive crops of every kind.

QUANTITY OF MILK FOR A POUND OF BUTTER.

I notice the retiring of the veteran Editor of the *Massachusetts Ploughman* to his farm in Framingham, where I wish him many years of peace and contentment. For a long time I was accustomed to con his lucubrations with much interest, until I had the misfortune to differ with him in opinion as to the quantity of milk necessary for the production of a pound of butter—he having asserted and maintained that *four quarts* of the milk of his Devon stock was sufficient for this purpose. I thought *then*, and am of the opinion *now*, that his assertion was not correct. I believe that it requires from six to ten quarts of the milk of the best of cows to produce a pound of butter, and oftentimes nearer three gallons than one is necessary for this purpose. So say those who have the making of my butter, and I believe them as honest and intelligent as any other butter-makers.

P.

HOW TO SAVE GIRDLED TREES.

While examining some apple trees in the garden where I live, I found that the mice had girdled several of them, one of which was a Porter, it being seven inches through at the but, and I thought I would save it if it could be done. In April I cut some scions from the tree and inserted the ends of them in the tree between the bark and the wood, above and below the girdled space, placing them two inches apart; then covered the space with green cow dung, and wound a cloth around it to keep it from falling off or drying up. The tree leaved out and blossomed and has grown finely, besides bearing several bushels of nice apples. On examining it last week, I found that it was healing over nicely. I believe that ninety-nine out of every hundred girdled trees, can be saved. I write this that others may be benefited by it.

C. B. RATHBUN.

Berlin, Nov., 1862.

For the *New England Farmer*.

THE LATE ESSEX COUNTY CATTLE SHOW.

MR. EDITOR:—I have noticed a communication in the *Farmer* of the 18th of October last, from your correspondent "P.," giving his "impressions" on various matters connected with the Essex Cattle Show. I think his "impressions" must tend to mislead the public in some, if not in all the particulars about which he speaks.

"P." says, in speaking of the plowing-match, "the field was the worst I ever saw plowed." If his impression was correct in this particular, it is much to be regretted that he has not spent some of the time he has devoted "for the last *forty-four years*" in attending "every meeting of our society, and of the Trustees," to the examination of plowing and plowed fields. I should suppose a man of "P.'s" observation, or means of observation, would know that of all the land plowed in Essex county, full one-half is worse to plow than the field then plowed. "With no sod," he says, "and full of cobble-stones, &c." One would think "P." did not see the part of the field that was plowed, at all. There was some sod on the field plowed, but not enough; if there had been, it would not have needed plowing. There were no "cobble-stones" on more than one or two lands, and on those, but a few on one end. There was a little gravelly knoll at one end of the field, on which the "Trustees" stood, and "P." I suppose with them. On this knoll was not much sod, and some "cobble-stones." Is it not probable, and entirely certain, that "P." got his "impressions" wholly from this knoll, and failed to see the plow-field at all? The town could offer a better field, but the same one having been plowed at the show in Georgetown twenty-two years ago, it was deemed no insult to offer it again. And it is thought by some good farmers, that fields the smoothest and easiest to be plowed, are not so desirable to test the plows, plowmen and teams, as those more difficult.

As to the quality of the "animals," many would disagree with "P.'s" conclusions. I hope he will name the farms where the superior herds can be found. I don't know as the plow-field is in fault, because there were not more horses present. I

suppose "P." was aware that at the time of the show, there was much excitement in the community on account of the war. And the first day of the show there were "appearances of rain," and the second day rain came.

I am surprised at "P.'s" "impressions" as to the "show of fruits." I fear he is disposed to find fault, because the show was in Georgetown, and not nearer his home. I know fruits are not cultivated in so extensive varieties in Georgetown and its vicinity, as in some portions of the county. And I would suggest this as a reason why "P." should see to it that the show shall be in Georgetown next year, and that a better collection from a "single garden" shall be gathered and exhibited, to give a stimulus to fruit-growing in this town and vicinity. I would further add, for the benefit of all turnip-raisers, that "P.'s" impressions in regard to "a project to secure an election to the Board of Trustees" are incorrect. The project had been referred to a committee, the committee have reported; the report of the committee has been rejected, and the committee discharged, and consequently, no report can reasonably be expected next year.

GEORGETOWN.

Nov. 6, 1862.

THE CLOSE OF THE YEAR.

The preparation of an *Index* to the annual volume of the *Farmer*—made up in book form of the numbers which are issued for the respective months—leads us to a sort of *review* of our editorial labors during the past year. It is necessary in this part of our pleasant duty to get the title or subject of the articles, and in so doing we rapidly scan many of them, in order to catch anew their spirit, to impress more firmly upon the mind some suggestion or truth, or to learn whether the work, upon the whole, is adapted to the wants of the farmer, and will have that influence in his household for which it was intended.

We have now finished that review, and cannot see how any material change in the objects sought can be advantageously introduced. What *we* have written has sprung from a *love of the occupation of the farmer*, and from a *real life on the farm*,—not occasional and incidental,—but from a constant *oversight* and *contact* with every variety of labor that any farmer is called to engage in. It has grown out of our strong, living faith in the necessity and beneficent influences of rural life.

Our *correspondents* have been numerous, intelligent and practical,—what they have said, being generally the result of their observation or experiments on their own premises. They have usually written in clear and forcible language, in courteous and gentlemanly terms, and evidently with a desire to contribute to the common stock of knowledge which is demanded by intelligent and progressive farmers. That they have not labored in vain, we have the testimony of thousands of skillful cultivators of the soil, as well as of mechanics, merchants and professional men.

But the field labors of the year are now over. The grand round of the seasons has once more brought to the vegetable kingdom, as well as the husbandman, a period of comparative repose. The trees have cast their leaves, and now their brawny branches stand out in bold relief against the open sky. But though stript and exposed to the winter blasts, they are full of life and energy, and have already upon them the germ of future crops of health-giving fruits. The embryo buds are already set, which will be quickened into beautiful life by future vernal showers and solar rays. Fitting type of what *our* lives should be,—filled with every manly virtue and grace, and thus setting the bud of immortality which shall blossom and forever exhale its fragrance in the skies. Sombre days have come; the clouds are thick and dark; cold winds whistle in the bare branches; occasional snow-flakes fly, and night shuts in suddenly upon us after four o'clock. The domestic animals seek shelter, and look wistfully for the care of man, or chew the cud of contentment, in sunny places, if they can find them.

It is the FALL of the year—nothing but that familiar New England term will express it. The sun *falls* short of his long summer journey; the Months have one after another *fallen* away from our grasp; fruits and leaves *fall*, and the glories of the garden *fall* by the first perishing frost. So, with the departing Year, *falls* another period of our mortal life.

It is not strange, then, with all these signs of decay about us, though they are the natural and indispensable operations of nature—that the mind should sometimes partake of their hues, and be less elastic and hopeful than in the glowing hours of Spring or amidst the plenitude of mid Summer.

This, then, is peculiarly the season to seek new measures of Faith and Hope. To clothe the Mind with fresh inspirations of these qualities, and firmly establish it in the promise that seed time and harvest shall not fail, and in the belief that God loveth a cheerful heart, as well as a "cheerful giver."

The year has been one of new experiences to most of us. The Great Rebellion which we are now living through, will become the theme of future ages, and this sharp trial of our free institutions, the terrible destruction of human life and property, and the derangement of business at home and abroad, will be recorded in their true colors by the pen of the historian. Only those actually engaged in the strife will be able to realize its horrors. Not us, at home, however deeply the foundations of civil liberty may be shaken. Actual contact can only bring a realizing sense of the horrors of war.

At such a period as this, the farmer will feel its

sad effect upon his business less than those engaged in most other occupations. His home remains undisturbed, and his pursuits untrammelled, while the demand for all he can produce will be quick. None have more reason for a thankful spirit than he. So, with the poet, he should sing:

"Then heap up the hearthstone with dry forest branches,
And gather about me my children in glee;
For cold on the upland the stormy wind launches,
And dear is the home of my loved ones to me."

For the New England Farmer.

AMONG THE GREEN MOUNTAINS.

The Seasons—Crops—Orchards—Wool, Mutton and Lambs—Army Horses—Caledonia Farmers' Club—Patriotism.

MR. EDITOR:—The season is past and the harvest ended, and in many respects it has been a profitable one. During the earlier months of spring, the prospect bid fair for a wet season, with an abundance of hay; but this extreme was followed by the opposite, so that hay came in unusually light, and some other crops suffered somewhat from the effects of the drought. Very little rain fell during the summer months till August. We then enjoyed refreshing rains, and vegetation generally seemed to renew its vigor and spring forth into a newness of life and growth. The grain crop was very good. Indian corn was injured in some instances by the late spring frosts, and the workings of the worm. No appearance of the aphid was noticed, and I think it did not venture among our Green Hills this season. Potatoes yielded well. In some localities, on low, moist lands, they were some diseased, but not to cause any serious loss as a whole. They are now sold at 25 cents per bushel, and shipped to the soldiers, it is said. Fruit is quite plenty, where there are fruit trees. Many of our largest and best orchards have become so reduced in trees that scarcely a fourth part as many apples are gathered from them as formerly. Very few orchards stand as full and thrifty as they did ten years ago. We shall have to wait for a new growth.

Store sheep are in demand, at prices from \$3.00 to \$6.00 for the common wools. Our wool-growers have realized large profits from their sheep the present year. Wool brought 50 and 60 cents, and mutton-lambs \$2.50 to \$3.00. When such prices rule, wool growing is profitable.

Beef has been in demand, but at much less remunerative prices. There is quite a call for army horses. The medium grade is wanted,—just such "stock" as many of our farmers can best afford to spare at this season of the year.

The Caledonia Farmers' Club held its third annual Fair at Lyndon, Oct. 8th. The day was exceedingly warm for the season—84° in the shade!—the hottest October day known for years,—so says the "oldest inhabitant." The Fair was very successful and satisfactory. The show of stock was good, as was that of the other departments. The attendance was large—from five to six thousand people were present during the day. We are at present having fine weather for November. No snow to speak of has fallen; nor has there been frost to prevent farmers from plowing and completing their fall work preparatory for the snows of the coming winter.

Patriotism among the Green Mountains is quite *à par*. The Green Mountain Boys have promptly responded to every Government call,—and Vermont's entire quota is *full of volunteers*! Sixteen regiments are now in the field, in readiness to

"Strike for their altars and their fires,
For God and their *Native Land*!"

I. W. SANBORN.

Lyndon, Vt., Nov. 6, 1862.

WINTERING HORSES.—A Connecticut farmer winters his horses on cut hay and carrots. In the morning each horse receives six or eight quarts of carrots, with half a bushel of cut hay; at night he has the same quantity of hay mixed with three quarts of provender, consisting of oats and corn in the ear ground together. This keeps them in fine health and good working order.

LADIES' DEPARTMENT.

WHAT IS A LADY?

A great deal of argument is going the rounds respecting the title of lady and the name of woman. The expression "Lady" is so much abused, that I infinitely prefer the sweet, unpretending title of woman. If we could but sift the chaff from the wheat, abrogate all the self-styled "ladies," there could be no objecting to the title; but ministers of grace defend us from some ladies of the present day, who do not even know why a woman should be so called. A lady must possess perfect refinement and intelligence. She must be gracious, affable, and hospitable, without the slightest degree of fussiness. She must be a Christian, mild, gentle, and charitable, unostentatious, and doing good by stealth. She must be deaf to scandal and gossip. She must possess discrimination, knowledge of human nature, and tact sufficient to avoid offending one's weak points, steering wide of all subjects which may be disagreeable to any one. She must look upon personal cleanliness and freshness of attire as next to godliness. Her dress must be in accordance with her means, not flashy. Abhorring everything like soiled or faded finery, or mock jewelry, her pure mind and clear conscience will cause the foot of time to pass as lightly over the smooth brow as if she stepped on flowers, and, as she moves with quiet grace and dignity, all will accord her instinctively the title of lady. If I had time and your patience, I could present the other view of the case, looking upon this picture and upon that. But when one constantly comes in contact, in omnibuses, cars, stores, the promenade, places of public amusement, wherever women are generally found, with those who loudly arrogate to themselves the contested title, can you wonder at the disgust it produces?

TO COPY FERNS.—The most perfect and beautiful copies imaginable of ferns may be made by thoroughly saturating them in common porter, and then laying them flat between white sheets of paper, (without more pressure than the leaves of an ordinary book bear to each other,) and let them dry out.

PRINTING PAPER AND THE MONTHLY FARMER.

The disturbance in business relations is general. It not only paralyzes commerce and manufactures, but descends to the minutest ramifications of social life. All arts and trades feel it, and perhaps none more than newspaper publishers. The great advance in paper—about one hundred per cent.—is not the only difficulty in the way. A more grave question is behind,—Whether it can be obtained at any price? When the materials must be imported, and the gold to pay for them is at a premium of *thirty* per cent., the question certainly becomes a grave one. Our *prices* for the *Farmer* are established, and we are unwilling to disturb them, and our patrons, we feel sure, will not allow us to publish at a loss. In times like these, publishers and patrons must have a generous confidence in each other, and mutually share the burden which they bring, as alone, they would break either party down. We shall not change the price of the *Monthly Farmer*, as many of our contemporaries have done with their papers, but reduce the number of its pages, until the paper can be obtained at a price that will not be ruinous. In the meantime we shall *condense* as much as possible, so that the reader will find a full remuneration for the low sum which he pays, and as the price of paper decreases, we shall add pages until our usual number is reached again.

THUNDER IN WINTER.—If it is asked why we have no thunder in winter, though the tops of the storm clouds rise even in this season to a region where the air is at least considerably charged with electricity, perhaps the answer may be found in this—that the storm clouds in the winter are of great extent, and of course the tension of the electricity, being extended over a very large surface, is very feeble; and the substance of the cloud being itself framed out of vapor much less dense than that of summer clouds, this tension may not be able to strike from one particle of the cloud to the next adjacent one; no general discharge can take place. Besides, even in the winter, during a very warm spell of weather, with a high dew point for the season, we sometimes have a violent thunder storm from a cloud of very limited horizontal extent, as the *thunder clouds* always are in the *summer*. Such a cloud is in reality an insulated pillar of hot air mingled with condensed vapor, having just given out into the air itself its latent caloric, causing the air at the top of this cloud, in many cases, to be sixty degrees warmer at its top than the air on the outside at the same level.—*Prof. Espy.*

CATTLE MARKETS FOR DECEMBER.

The following is a summary of the reports for the four weeks ending November 20, 1862:

NUMBER AT MARKET.

	Cattle.	Sheep and Lambs.	Pigs.	Live Fat Hogs.
October 30.....	3774	3412	250	1800
November 6.....	4436	6388	600	3000
“ 13.....	3562	5727	600	2500
“ 20.....	4413	7807	600	4500
	16,185	25,334	2050	11,800

The following table shows the number of cattle and sheep from the several States, for the last four weeks:

	Cattle.	Sheep.
Maine.....	3040	4577
New Hampshire.....	2239	2555
Vermont.....	6259	8848
Massachusetts.....	370	—
Northern New York.....	848	1884
Canada.....	435	6052
Western States.....	2094	518
Total, last four weeks.....	16,585	25,334
Corresponding four weeks, { last year,	11,560	18,708

PRICES.

	Oct. 30.	Nov. 6.	Nov. 13.	Nov. 20.
Beef, $\frac{1}{2}$ lb.....	33 $\frac{1}{2}$ ¢	34 $\frac{1}{2}$ ¢	34 $\frac{1}{2}$ ¢	34 $\frac{1}{2}$ ¢
Sheep and lambs.....	\$3 44 $\frac{1}{2}$	\$2 $\frac{1}{2}$ 44 $\frac{1}{2}$	\$3 44 $\frac{1}{2}$	\$3 44 $\frac{1}{2}$
Swine, stores, whole... 4	44 $\frac{1}{2}$	34 $\frac{1}{2}$ 44 $\frac{1}{2}$	34 $\frac{1}{2}$ 44 $\frac{1}{2}$	34 $\frac{1}{2}$ 44 $\frac{1}{2}$
“ “ retail.....	44 $\frac{1}{2}$ 46	44 $\frac{1}{2}$ 46	4 46	44 $\frac{1}{2}$ 46 $\frac{1}{2}$
Fat hogs, live weight.....	44 $\frac{1}{2}$ 44 $\frac{1}{2}$	44 $\frac{1}{2}$ 44 $\frac{1}{2}$	44 $\frac{1}{2}$ 44 $\frac{1}{2}$	44 $\frac{1}{2}$ 44 $\frac{1}{2}$

REMARKS.—The number of cattle and sheep reported for the month is very large, being an average of 4046 cattle and 6353 sheep per week. Last year for the corresponding four weeks the average was 2890 cattle and 4677 sheep, per week. In other words, there have been at market, the last four weeks, 1156 cattle and 1556 sheep more, per week, than the average number of the four corresponding weeks last year.

Perhaps something like one-fourth of the above number of cattle may be reported as stores—working oxen, milch cows, and young cattle.

The supply of beef, however, during the past month has been greater than the demand, especially for the last three weeks. Prices have consequently declined, especially on the medium qualities of beef. More or less cattle have remained unsold at the close of each of the last three weeks,—a most conclusive evidence of hard markets for the drovers. They understand very well the expense and trouble of keeping stock in the vicinity of Boston, from one week to another, and will not do so if any reasonable offers are made for their cattle.

Although the price of most of the productions of the farm, as well as of goods in general, has greatly advanced within a short time, and although the hide and tallow of beeves is worth some two dollars per hundred more than they were one year ago, live cattle have sold little if any better during the past month than they did then.

The proportion of oxen among the beef cattle has been unusually large during the month. If the farmers send off their oxen earlier than usual this year, on account of the high price of grain, or other reasons, the winter's supply may fall short.

Sheep and Lambs have found a ready sale the past month within the range of our quotations. From 4 $\frac{1}{2}$ to 5¢ per lb. has been the top price for extra sheep and lambs,—poorer ones much lower, although the high price of pelts, from \$1.50 to \$1.75 each, helps to keep up the price of all grades. It will be noticed that full one-third of the sheep and lambs are reported from Northern New York and Canada.

Working oxen have been quoted during the month at from \$50 to \$110 per pair. Extra somewhat higher. A large number at market: some of which have been kept over one or two weeks.

Milch cows have been sold better perhaps than any other stock. Comparatively few at market. Forward two-year old heifers and cows from \$15 upwards. Cows and calves from \$20 to \$50; most sell at \$30 to \$40.

Fat hogs have improved during the month, but declined somewhat at its close. Good at about 6 $\frac{1}{2}$ ¢, dressed.

Hides and tallow advanced. Hides 7 ¢ 8¢. Tallow 8 ¢ 8 $\frac{1}{2}$ ¢. Calf skins 12 $\frac{1}{2}$ ¢ per lb.

